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EDUCATION AND RESEARCH

UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

CENTER FOR INTERNATIONAL EDUCATION AND RESEARCH IN ACCOUNTING OF THE COLLEGE OF COMMERCE AND BUSINESS ADMINISTRATION

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V. K. Zimmerman, *Director*

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V. K. Zimmerman, *Editor*
JaNoel S. Lowe, *Assistant Editor*

Contents

Management of a Multinational Public Accounting Firm

DUANE R. KULLBERG*

The subject of this paper is the management of a multinational accounting firm — a subject seldom discussed outside the offices of individual firms. This reticence is due in part to the intricacies of partnership agreements, in part to the intricacies of internal management, and in part to the difficulty in articulating fully how an accounting firm is managed. The preparation of this paper has provided me an opportunity to think of the methods and structure of Arthur Andersen & Co., and it has helped me to arrive at some new insights into our organization and its current operation.

Arthur Andersen & Co. has 142 offices in forty-four countries, with about 20,000 persons from many cultural and educational backgrounds. With few exceptions, we use no U.S. expatriates: we staff and operate our international offices mainly with host-country nationals.

The fact that our firm is a true worldwide partnership makes us unique among public accounting firms. We refer to this feature as our "one-firm" principle of organization. Its purpose is to ensure a uniform level of client service wherever we practice. Consistency of performance is important to our multilocation clients, especially those that are transnational. Our clients know they can expect superior service from us no matter what their geography, function, or industry. However, we used this principle long before we became transnational. When Arthur Andersen & Co. was serving companies only in the United States — that is, prior to the 1950s — we wanted all our U.S.

* Duane R. Kullberg is managing partner and chief executive officer of Arthur Andersen & Co.

clients to receive the same answers to the same questions, and with uniform authority. In our later expansion outside the United States, we found it even more urgent that our clients know that our service to them will be consistent throughout the world. Other public accounting firms have a looser affiliation and coordination of national entities. In our view, this cannot provide the same assurance that responses will be consistent, or that the level of service will be uniform.

It is easy to declare a "one-firm" principle — most firms claim worldwide coordination — but it is harder to accomplish this without the special financial and legal ties that we have. For example, in 1977 we established the Arthur Andersen & Co. Société Coopérative (S.C.) as our worldwide coordinating entity. This S.C. is physically located in Geneva, Switzerland. Each partner in our worldwide organization is a member of the S.C. and a member of another partnership. That is, a partner in France is a member and owner of both the French Arthur Andersen firm doing business in that country and a member of the Arthur Andersen S.C. Because the S.C. engages in no accounting or professional service practice, our French partner in this example violates no professional requirements that may be in effect in France. Because of our worldwide partnership, we have a worldwide sharing of expenses and thus a worldwide sharing of revenues that links all of our partners into a worldwide pool and a common goal of profitability. I know of no other form of organization, corporate or otherwise, that can achieve this transnationality of interests — personal, firm, and client.

Unlike other public accounting firms, we do not have different classes of partners. We have only one class. There is no gradation in voting power among partners to reflect how long they have been with the firm or their level of responsibility. Our rule is that each partner has one vote. This contrasts with the systems in other firms, in which the number of a partner's votes reflects that partner's number of shares of ownership. Some other firms also withhold from some partners, because of their geographic location, the right to vote on all issues raised before management. It is true, however, that within Arthur Andersen the one-partner, one-vote democracy is a "fallback" position because it is impractical to apply completely in daily management of the firm. But, to my knowledge, no serious conflict has ever arisen between the democratic principles and the daily functioning of our firm. Our partners are extremely well-informed owner-managers.

One of the more important professional questions we face involves our scope of practice — that is, the limitations that we place upon

our own professional service. The scope of practice can vary with a country or market, but the quality of service must never vary. In recent years, we have understood that if an activity or service is regarded as proper to an accounting professional within a certain country, to exclude ourselves from providing that service would do our clients more harm than good.

Our worldwide Committee on Professional Standards deals with questions concerning the scope of our practice. It considers requests to expand into an area of professional practice, whether this would adversely affect the firm in that country or in other countries, and whether we have the skills in that area or still need to develop them.

Essentially, Arthur Andersen & Co. has a matrix organizational structure with these dimensions: *geographical* — various offices in different countries, areas, or regions; *practice* — services in accounting and audit, tax, and management information consulting; and *functional* — finance and administration, personnel, professional education, and others. The line organization generally is geographically oriented. Our practice organization and our functional specialties cut across these lines to create our matrix structure. Our industry competence program also cuts across this already cross-hatched structure. We pay special attention to forty-two industries that account for some 90 perent of our fees. Examples would be manufacturing, utilities, transportation, health care, insurance, and banking.

Our professional education division is another important organizational tie that holds our organization together professionally and philosophically. Each firm professional receives centralized training from this division. A good portion of the training occurs on a former small college campus the firm owns in St. Charles, Illinois. During the first ten years of a career with us, a professional will receive some two full college semester courses of training per year. Additional training that occurs after the tenth year improves pre-existing skills or adds new management perspectives. This centrally developed training gives us a commonality of backgrounds, a commonality of experiences, and an ability to apply a uniform method — regardless of client location — to the technical questions our clients present.

Certainly our matrix organizational structure contains a potential for conflict, but because all of the partners share in the earnings, they have an excellent basis for resolving conflicts rationally. If a partner can convince other partners that the firm can better serve the clients and (not incidentally) be more profitable, his or her arguments are

likely to prevail. He or she certainly will meet less resistance than if each partner were a separate profit center.

The method by which any organization, including Arthur Andersen, resolves philosophical differences or differences in approaches to similar problems also is important. We have an operating committee, composed of the heads of the practices, the functions, and the areas, that discusses issues of this kind. As chief executive officer, I reserve the final decision on strategic and key operating matters, but I rely on this committee as an advisory board to examine issues and help distill them to their basic elements.

At the core of all our efforts, and of our structure, is the individual office. Each office has its segments — auditing, tax, and management information consulting — and its sole aims are client service and profitability. Each office has a managing partner, the executive in charge. We combine our line and functional organizations within each office. It has a partner responsible for the tax practice, a partner responsible for the audit practice, and another responsible for the management information consulting practice. The offices have an average of twenty or so partners, so the matrices that characterize our worldwide organization cannot come to bear directly on each of these twenty. The office managing partner fills the gap by performing a coordination role. The twenty partners, we hope, talk to each other often. Thus, the key element in our structure is the personalities of our people — the individual partners and our staff.

Peter Drucker in his book *Management* suggested that it is nearly impossible to run a multinational public accounting firm as we do. In many ways, he is correct. He apparently did not consider, however, that the personalities — the individual partners — can move a firm forward. These individuals — not our structure, not our rules, not our bureaucracy — infuse an entreprenurial spirit into our daily operations. We pay tremendous attention to this entreprenurial spirit. It is extremely important to us and we constantly cultivate it.

Obviously, the bureaucracy of our structure can conflict with the eager desire of some partners to enter new areas or explore new solutions to old problems. My role — one of the most important activities I undertake — is to monitor and resolve this conflict. Whenever possible, I rule in favor of the entreprenurial spirit. Ours is a very large organization. I cannot examine individually every small question, so I must try to apply conceptual, rather than case-by-case, rulings. But I do thoroughly enjoy my involvement in the more important cases.

To summarize, I would repeat these crucial points:

1. We are multinational and multicultural. This presents a difficult challenge to management, but one I feel we have successfully met.
2. We do have a complex structure, but our system works because of our overriding emphasis on our local offices and our engagement partners.
3. The challenge to management will hardly ease soon. It probably will be more difficult in the future.

This is a brief summary of our principles of operation, yet I believe it includes all the major points that would figure in a longer analysis. I hope it suggests to you that Arthur Andersen & Co. takes a very conscientious, not to say original, approach to its internal organization.

Prospects for International Accounting and Auditing Standards—The Transnationals in Governmental Regulations

FELIX POMERANZ*

INTRODUCTION

Survey results published by the Organization for Economic Cooperation and Development (OECD) in 1980 reflected a consensus on the part of a group of transnationals (TNCs) that accounting systems should be made comparable.[1] The respondents to OECD's questionnaire concurred that the existing diversity in accounting and reporting practices may make it expensive for governments to collect and process reliable data for economic policy decisions, may lead TNCs to base decisions on contradictory sets of requirements, may discourage international investment, and may even involve hidden social costs.

If the reported results are given credence, they support the view that a substantial group of TNCs regards some harmonization of accounting standards as in the interest of all concerned. However, the danger exists that some harmonization actions already taken are likely to involve greater costs than benefits. Moreover, elements of uncertainty exist because some international bodies dealing with harmonization have moved at a glacial pace. In some cases there has been an inclination to "reinvent the wheel." In other cases, standardization seems to be based on the lowest common denominator. Governments

* Felix Pomeranz is a partner in the firm of Coopers & Lybrand.

[1] Organization for Economic Cooperation and Development, *International Investment and Multinational Enterprises: Accounting Practices in OECD Member Countries* (Paris: OECD, 1980).

should also be wary of regulations which are not enforceable due to a lack of skilled regulatory manpower. Further, precautions should be taken to avoid "overkill"; detailed rules are likely to impose significant burdens on TNCs without fostering the attainment of national goals of host governments. (In fact, the question may be raised as to whether appropriately defined national goals even exist in some nations. However, that issue goes beyond the scope of this presentation.) This paper presents some reasons for differences in accounting principles, reports the status of accounting rulemaking, and offers suggestions.

First, it is necessary to consider an important difference in financial reporting/accounting and auditing. In general, development of auditing standards and procedures has lagged behind development of accounting and reporting standards, leading to what some have called a "generation gap." The accounting/auditing dichotomy is nearly universal. In many countries, auditing represents a relatively new art practiced subject to but few formal procedures, with little emphasis on the nature of evidence.

Differences in the identity of users in various countries may have helped to create differences in accounting and reporting standards. In the United States, primacy as the recipients of accounting information has been accorded shareholder/users; albeit, creditor/users have been given recognition of *their* importance. In Europe, creditors rather than shareholders have been recognized in the design of accounting and reporting rules. And almost everywhere, government is viewed as an important, often *the* most important, user. In a seminal article on "purposive accounting," Dhia AlHashim opined that complexity of U.S. accounting principles and disclosure rules was partially attributable to the fact that the prescriber of rules (the Securities and Exchange Commission — SEC) represented a constituency other than the investor who had been dubbed the "prime user" of the financial statements.[2]

In much of the world, company law, rather than "fairness," dominates financial reporting. The questions of what constitutes fairness, and whether generally accepted accounting principles equate with fairness or to what extent, have created animated disagreements. While attempts are being made to promote supposed fairness via disclosures, this approach is likely to invite pitfalls, as mentioned later in this paper. A list of differences in reporting and disclosure practices of

[2] Dhia D. AlHashim, "Accounting Control through Purposive Uniformity," *International Journal of Accounting* (Spring 1973).

developing countries indicates the extent of the problem.[3] (See Appendix 1.)

Approaches to resolution of the differences in accounting principles and disclosures have generally involved laws and regulations, self-regulation by TNCs, and hybrid public/professional regulation based upon consultation between public authorities and accounting bodies. It would seem that the extent to which nations enforce harmonized standards is likely to be influenced by the support given to harmonization by a country, and the influence of its professional accountancy body. In any event, little research has been done to enable one to draw conclusions as to the effectiveness of the various approaches, the extent of implementation of harmonized standards, or the effect of such standards on national economies. However, the author would suggest that broad-based participation in rulemaking by *national* professional accounting bodies represents a positive force.

HISTORY AND STATUS

Organization for Economic Cooperation and Development

OECD was established to promote economic growth and expansion of world trade. In 1976, OECD promulgated comprehensive guidelines to improve standards of corporate morality, increase reporting and disclosure requirements for nonfinancial information, and obtain greater comparability among financial reports of companies operating under different accounting standards. OECD's recommendations applied to publicly held securities and were broadly similar to rules of the SEC. The OECD guidelines have set a pattern for similar exhortations by other intergovernmental bodies. OECD requested information relative to the following:

1. Structure of the enterprise;
2. Geographical areas of operations with breakdowns of principal activities for the parent company and its chief affiliates;
3. Operating results and sales by geographical area, and sales by major lines of business for the whole enterprise;
4. Significant new capital investment by geographical area and, as far as practicable, by major lines of business for the entire enterprise;
5. Statement of sources and uses of funds for the entire enterprise;
6. Research and development expenses;

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[3] United Nations Centre on Transnational Corporations, *International Standards of Accounting and Reporting for Transnational Corporations* (New York: United Nations, 1977), pp. 95-96.

7. Transfer pricing policies; and
8. Accounting policies including those pertaining to consolidation.

In July 1978, OECD's Committee on International Investment and Multinational Enterprises established an ad hoc working group on accounting standards. The group became permanent in 1979. Among other tasks, the permanent group was charged with developing recommendations pertaining to OECD's role in assisting in the harmonization of international accounting standards. Another mission involved clarification of the accounting terms appearing in the aforementioned guidelines. Also, it was decided that other interested groups, particularly the International Accounting Standards Committee (IASC), should be consulted.

European Economic Community (EEC)

The EEC has embarked on a mandatory program aimed at standardizing company law among the treaty states; to the present, it has drafted eight directives and a proposed statute for a European company. While some of the directives are still in a proposal stage, those passed include the Fourth Directive which will become law within the treaty nations by 1982. Willis A. Smith has tabulated the ways in which the watershed Fourth Directive diverges from U.S. generally accepted accounting principles (GAAP).[4] Mr. Smith's list (Appendix 2) is included to demonstrate the nature and extent of the disparities; indeed, some accountants have contended that the directive could force publication of two or even three sets of accounts.

The proposed Seventh Directive complements the Fourth Directive and covers consolidated accounts. It contains standard forms for the financial statements, specified headings, accompanied by requirements and methods of preparing overall and subgroup consolidated financial statements, and requirements as to accounting principles and disclosures. Publication of the consolidated financial statements, the group annual reports, and the report submitted by the auditor is required. (Among other things, the auditor's report is to include any observations concerning violations of law, plus any facts that constitute serious danger to the financial situation of the company.) The disclosures include information with respect to entities included in the consolidated financial statements, and operations information, including geographical and segment data. More significantly, the Seventh

[4] Willis A. Smith, "International Accounting Standards — An Update," *CPA Journal* (June 1980): 25.

Directive allows an alternative approach to consolidation based on criteria of control novel to U.S. accountants, rather than on legal ownership.

Given the fact of EEC's rulemaking, it is important to bear in mind that in most of the treaty nations, the role of the auditor differs from that in U.S. practice. Even in the United Kingdom, disclosure and other requirements are less strict than in the United States, while stricter than in the rest of the EEC. In an earlier presentation to a University of Illinois audience, this author commented upon differences in audit standards which affect auditors' independence, key audit procedures for, among other accounts, inventories and accounts receivable, and reporting.[5]

THE UNITED NATIONS (UN)

The UN has been active in international accounting rulemaking since 1972. The Secretary-General appointed a Group of Eminent Persons to examine the impact of TNCs on economic development and international relations. The Group of Eminent Persons observed the diversity in corporate reporting, and the difficulties encountered by governments in utilizing such information for decision making. It recommended formulation of an international system of standardized accounting and reporting. Accordingly, the Secretary-General, on instruction of the Economic and Social Council, convened a Group of Experts on International Standards of Accounting and Reporting (GEISAR).

GEISAR proposed a list of minimum disclosures to be included in reports of TNCs referenced to international accounting standards, and to be accompanied by a compilation of alternative accounting principles. GEISAR's requirements fall into the following categories:

1. Information to be disclosed on the face of financial statements;
2. Accounting policies to be disclosed;
3. Financial information on the members of TNC groups (including the structure of such companies, geographical dispersion of units, and certain intercompany transactions);
4. Segment reporting to indicate geographical and industry spread of TNCs; and
5. Nonfinancial information to be presented in annual reports grouped into (a) an employment report and (b) a report on pollution control measures.

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[5] Felix Pomeranz, "International Auditing Standards," *International Journal of Accounting* (Fall 1975): 1-13.

According to GEISAR, consolidation of group companies was desirable; exceptions were to be justified and accounted for by the equity method. GEISAR also required that certain items, of both a financial and nonfinancial nature, should be reported on a disaggregated basis, by geographical area and line of business. The items recommended for disaggregation include (1) sales to unaffiliated customers, (2) transfers to other geographical areas, (3) transfers to other lines of business, (4) operating results and/or net income and total assets, or net assets, or total assets and total liabilities, and (5) description of principal activities and new investments in each foreign geographical area or country.

GEISAR emphasized that the coverage of nonfinancial information in current reports constituted a gap in existing reporting practice. It averred that nonfinancial reporting was as important as financial reporting to comprehensive appraisal of the activities and impact of TNCs. To facilitate implementation, GEISAR suggested that size criteria were to be applied before requiring an enterprise to comply with the minimum items. Nonetheless, the GEISAR list could impose significant burdens on TNCs and others. Fitzgerald and Kelley have reported some ways in which GEISAR's recommendations depart from GAAP: (1) reporting would be required by large noncorporate and closely held enterprises; (2) possibly, reporting would be required by groups considered to be controlled via techniques or arrangements other than majority ownership of voting shares; (3) regional or geographical consolidations were proposed, possibly imposing an intermediate consolidation effort; and (4) detailed requirements for transfer pricing policy disclosures were recommended.[6]

The authors concluded by questioning

> the wisdom of attempting to superimpose a comprehensive disclosure system on an accounting data base developed under measurement standards that vary widely from country to country . . . . Accounting standards should be rational, objective and neutral.

The Secretary-General described the work of GEISAR as a significant achievement, and initiated steps toward the negotiation of an intergovernmental agreement to implement the proposed rules. Under such an agreement, each government would commit itself to legislative and other action to make mandatory the application of interna-

[6] Richard D. Fitzgerald and Eleanor M. Kelley, "International Disclosure Standards — The United Nations Position," *Journal of Accounting, Auditing & Finance* (Fall 1979): 5-20.

tional reporting standards by TNCs and member companies domiciled in a particular country.

Although some delegations to the 1978 Fourth Session of the Commission on Transnational Corporations had reservations with respect to some of GEISAR's recommendations, follow-up was considered desirable. Accordingly, in 1979 the Economic and Social Council established a thirty-four–member ad hoc Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting (IWG). The IWG is supplemented by observers from OECD, the European Communities, the International Chamber of Commerce, the International Confederation of Free Trade Unions, IASC, and the International Federation of Accountants (IFAC).

At its first session, the IWG agreed to concentrate on the following activities:

1. Recommend appropriate disclosures relative to a TNC code of conduct;
2. Review the information to be required from individual corporations in the context of a comprehensive information system being developed by the Centre on Transnational Corporations (CTC);
3. Concentrate on minimum standards for accounting, reporting, and disclosure, given GEISAR's recommendations;
4. Consider further steps to improve comparability of information; and
5. Consider the participation of developing countries and of the UN in formulating and adopting international standards of accounting and reporting.

According to Klaus A. Sahlgren, assistant secretary-general,

> IWG is intended to serve as the central forum within the United Nations system for the comprehensive and in-depth consideration of international standards of accounting and reporting.

Assistant Secretary-General Sahlgren envisages that the IWG's activities will include (1) continuous development of international accounting standards to meet current and changing needs; (2) consultation and negotiation to secure international agreement among governments; (3) promotion to gain wide acceptance by interested parties such as commerce and industry, labor organizations, and professional and regulatory bodies, as well as academic institutions; (4) effective communication to insure dissemination on a global basis; (5) consistent application at national and international levels; and (6) regular monitoring of implementation.[7]

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[7] Klaus A. Sahlgren, unpublished remarks at the First Session of Ad Hoc Intergovernmental Working Group of Experts on International Standards of Accounting and Reporting, February 11, 1980.

The Assistant Secretary-General submitted to IWG the CTC studies comparing various reporting standards with the minimum list proposed by GEISAR. The studies concluded that financial items proposed for disclosure by GEISAR were, for the most part, already called for by professional standards-setting bodies. The author presumes that differences of opinion could arise as to the impact of items *not* called for by such bodies. The view of one distinguished commentator has been previously noted.

Other Regional Groupings

Only 15 percent of UN member nations are represented in OECD, 28 percent in IASC, and 35 percent in IFAC. Thus, it is not surprising that regional professional groups have shown interest in upgrading accounting and auditing standards. In this connection, the Asian Federation of Accountants issued the first of a series of accounting standards in 1979 concerning fundamental accounting principles. In 1979, the African Accounting Council addressed itself to the formative stages of regional accounting rulemaking.

Professional Accountancy Bodies

At the International Congress of Accountants in October 1977, IFAC was formed to foster a worldwide accountancy profession with harmonized standards. IFAC has produced a number of auditing guidelines. Guideline No. 1 noted that "the objective of an audit of financial statements, prepared within a framework of recognized accounting policies, is to enable an auditor to express an opinion." A later guideline described the basic principles governing an auditor's professional responsibilities. In general, IFAC guidelines follow the auditing precepts of industrial countries. In some instances, the more rigorous aspects of those precepts appear to have been omitted, diluted, or left as alternatives. Comprehension by readers of the internal control concept — a concept largely unknown even in OECD nations — is assumed. Differing approaches to measurement are not mentioned. Government auditing requirements are ignored. This author believes that IFAC's rulemaking could benefit from cross-pollination through the addition of representatives of developing countries to its roster of rulemakers.

IFAC has a tenuous relationship to IASC. The latter, representing forty-two countries, developed in 1973 as a result of an agreement of leading professional bodies. IASC has issued some fifteen standards, various discussion papers, and a group of exposure drafts. Additional

work is under way. Again, the base for IASC's standards is provided by standards already published, largely within industrialized countries.

Government Auditors

As previously indicated, auditing is at a less advanced level of development than accounting. However, within the auditing discipline, government auditing has led private-sector auditing in international cooperative action, as well as in the development of new concepts and implementational technology. Elmer B. Staats, comptroller general of the United States, has written:

> ... Financial information is not sufficient to inform a government manager and decision maker ... about achievements and failures in carrying out government programs. ... There are three areas where we must concentrate ... :
> Development of international accounting and auditing standards.
> Better accountability by international organizations.
> Improved training and professional development opportunities for government auditors (on an international level).[8]

Comptroller General Staats also recommended strengthening the International Organization of Supreme Audit Institutions, a UN affiliate, to foster a stronger sense of cooperation among governmental auditing organizations, private industry, and the public accounting profession.

While international government auditing has been paced by the activities of the United States General Accounting Office, internal auditing has also risen in international stature as a result of greater attention to the question of illegal payments and bribes, expanding regulatory requirements, and growth of new constituencies among report recipients. The performance of nonfinancial or operational audit activities is higher for internal auditors abroad than in the United States; operational auditing is mandated to some degree in Sweden, Austria, and other nations.

A LATE COMMENT

At the time of this writing, IWG had just completed its third session. The delegates voiced support for these criteria: (1) appropriate disclosures based on flexible minimum lists, (2) application of materiality criteria relative to disclosures, and (3) nondiscrimination between TNCs and national companies.

IWG's discussion of GEISAR's listing aired, but did not resolve, what appear to be troublesome differences of opinion between the

[8] Elmer B. Staats, "Comprehensive Auditing — Planning the New Approach for Century II," *Government Accountants Journal* (Spring 1979): 32-40.

less developed and the industrialized nations. Possibly IWG's work could be focused more finely if it developed a more precise charge for itself. In this connection, IWG's former chairman, Dr. Jaime Laya, Minister of the Budget of the Philippines, has said: "Development of standards should be based on specific objectives, concepts, and criteria."[9]

Moreover, a need exists for disseminating CTC and IWG criticisms of international accounting and reporting rules to the originators of those rules; in particular, channels should be established for apprising the rulemakers of issued pronouncements which fall short of IWG's or CTC's expectations. IWG should also create a mechanism for conveying inputs to rulemakers, while statements are still in the drafting or negotiating phase. Further, if CTC or IWG were represented on rulemaking bodies, the UN would become increasingly causative in setting accounting and reporting standards. Some moves in these directions are likely.

This author would also like to emphasize the question of whether disclosure requirements in the United States — based on the perceived information needs of investors and creditors — answer the very special needs of users abroad such as governments and trade unions. (For example, the Intra-American Accounting Conference identified a broad-based set of user information requirements, giving primacy to the assessment of managerial efficiency as a basis to determining tax and social policy.) Thus, GEISAR's requirements should be carefully culled and prioritized to determine which are crucial to the achievement of national goals.

Hopefully, IWG will rely increasingly on the work of IASC and IFAC assuming those bodies broaden their constituencies and make their rules more responsive to the needs of the international user group. Perhaps alternatives to detailed accounting rulemaking could also be considered in the light of existing enforcement capabilities: (1) TNCs could comply with broad objectives, rather than with detailed rules, and (2) incentives might be established for positive compliance, in lieu of penalties for noncompliance.

SUMMARY AND CONCLUSIONS

Various bodies are promoting international harmonization of accounting and auditing. Over the near term, it is likely that the UN will rely

[9] Jaime Laya, quoted in unpublished remarks of Klaus A. Sahlgren "The Need for Standards and the Role of the Standard-setting Agencies" (London, September 15, 1980).

increasingly on the efforts of bodies such as IASC and IFAC for the "first cut" of rulemaking. Risks exist. From the point of view of the less developed countries, the approach may not make available data needed to promote national goals. From the standpoint of nations with accounting sophistication, a danger exists of standardization on the lowest common denominator.

In any event, this author forecasts a greater regulatory role by a reconstituted IASC/IFAC. This may offer TNCs continued planning opportunities through selection of optimum accounting treatments in particular circumstances. In addition, EEC will have a great impact on international regulators, given the politics of UN rulemaking. EEC laws should alert TNCs to eventual data-base requirements, thereby enabling systems analysts to get a head start on data collection and systems modifications. Moreover, international accounting firms should position themselves to assist clients to comply with EEC requirements.

APPENDIX 1. SELECTED DEVELOPING COUNTRIES: REPORTING AND DISCLOSURE REQUIREMENTS AND PRACTICES

	Argentina	*Bolivia*	*Brazil*	*Chile*	*Colombia*	*Ethiopia*	*India*	*Iran*	*Kenya*	*Malaysia*	*Mexico*	*Nigeria*	*Pakistan*	*Peru*	*Phillippines*	*Singapore*	*Venezuela*	*Zaire*
Certified financial statements filed annually																		
By all countries	R	N	N	N	N	N	R	R	R	R	N	R	N	N	R	R	R	N
By specified companies (regulated, publicly traded, over certain size)	R	R	R	MI	R	R	R	R	R	R	R	R	R	R	R	R	R	R
Statutory financial statements prepared in accordance with official format	R	N	R	R	R	N	R	—	N	N	N	N	R	R	R	N	R	N
Statement of changes in financial position included in general-purpose financial statements	MI	MI	MI	MI	MI	MI	MI	MI	N	MI	R	MI	MI	R	H	MI	R	N
Accounting practices adhere strictly to tax requirements	MI	MA	MA	MI	H	MI	N	MA	N	N	MI	N	N	H	N	N	NP	N
Accounting principles chosen to meet given circumstances disclosed	MA	MI	H	H	MI	MI	MI	MA	H	N	R	MI	N	R	R	R	R	N
Basis on which fixed assets are stated is disclosed	R	MA	R	MA	MI	MA	R	MA	R	R	R	R	R	R	R	R	R	MI
Method of computing depreciation disclosed	R	MI	MI	MI	MI	MI	MI	MA	H	MI	R	MI	H	R	R	R	R	MI
Inventory carrying basis disclosed	R	H	MA	MI	MI	MA	N	MA	H	MI	R	N	MI	R	R	MI	R	MI
Basis of foreign currency translation disclosed	R	MI	MI	MA	MI	MA	MI	MA	R	R	R	R	R	R	R	R	R	N

Source: United Nations Centre on Transnational Corporations, based on *A Survey in 46 Countries: Accounting Principles and Reporting Practice* (Price Waterhouse International, 1975).
Key: R — Required by law or otherwise mandatory; MA — Practice of majority of companies; H — Practice of about half of companies; MI — Practice of minority of companies; N — Not found in practice or not applicable; NP — Not permitted; Dash — Information not available.

APPENDIX 2.

Disclosures	*Required by U.S. GAAP*	*Required by Fourth Directive*
Earnings per share	X	—
Dividends per share	X	—
Business segments		
Revenue (sales) information	X	X
Profitability information	X	—
Identifiable assets information	X	—
Other related disclosures	X	—
Geographical segments		
Revenue (sales) information	X	X
Profitability information	X	—
Identifiable assets	X	—
Employees by categories, remuneration, and social costs	—	X
Remuneration of directors and commitments as to pensions	—	X
Accounting principles		
Inflation accounting	Supplementary data required	Permitted — not required
Goodwill — maximum amortization period	40 years	Generally 5 years
R & D expenditures	Expensed	May be capitalized with 5 years amortization
Equity accounting	Required	Permitted — not required
Deferred tax accounting	Required	Not required

International Harmonization of Accounting and Reporting

RICHARD D. FITZGERALD*

This paper will examine the differences in accounting and reporting practices existing in various parts of the world, the problems which these differences cause, and the efforts that are being made to mitigate the differences.

Accounting principles and reporting practices provide a means of international communication and, in theory, should know no frontiers. They should cross boundaries as freely as the business practices they are intended to reflect. In practical terms it is, of course, to be expected that these principles — and perhaps even more so, reporting practices — should reflect the economic and social environment of separate nations and regions. Therein lies the seed for differences in accounting principles and financial reporting practices.

Fortunately, there is an increasing awareness of the desirability of eliminating unnecessary differences or, when differences are justified, of promoting a better understanding of why they exist. Various organizations have published or are preparing pronouncements aimed at a greater harmonization of international accounting. These include the International Accounting Standards Committee (IASC), the Organization for Economic Cooperation and Development (OECD), the United Nations Commission on Transnational Corporations, and the European Community.

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THE NATURE OF THE PROBLEM

In essence, accounting is a language, a means of recording and communicating information. As in all languages, unless the grammar and vocabulary are strictly defined, there is a serious danger of being misunderstood. Ordinary English words, such as *holiday, subway,* and so on, can have very different meanings, for example, on the two sides of the Atlantic. So it is with accounting.

The U.S. reader who assumes that U.S. generally accepted accounting principles (GAAP) have been used in preparing foreign financial statements will often be in for a rude awakening upon discovering that the assumptions so familiar to him or her do not apply. The following are a few examples, based on the International Survey of Accounting Principles and Reporting Practices, which Price Waterhouse has published.

Consistency

Although in most countries financial statements are prepared on a consistent basis year by year, this practice is not universal. In fifteen out of sixty-four countries surveyed, departures from the consistency concept may not even be disclosed in the financial statements.

Historical Cost

Although the profession in the United States is now experimenting with current-cost and constant-dollar accounting, it is firmly rooted in the historical cost convention for primary financial statements. Again, this is not universal. In most South American countries, continuing high inflation has necessitated inflation adjustments if financial statements are to have any meaning. Even where inflation is less rampant, periodic revaluations of land, buildings, and plant are not uncommon.

Overconservatism

In some countries, it is common for reported profits to be understated and sometimes systematically "smoothed" by the use of "secret reserves" or "equalization accounts" which reduce the disclosed amounts of fixed assets or inventories. In these cases, the financial statements are effectively a representation that the state of affairs is "at least as good as disclosed," rather than "as disclosed."

Other Basic Divergencies

As further illustration of the diversity in multinational reporting, some fundamental concepts, selected from a large number of accounting

principles and practices reported in the survey are presented; focus is placed on twenty member countries of the OECD, that is, developed countries with reasonably sophisticated accounting and information-processing capability.

Are consolidated financial statements prepared when an investor owns more than 50 percent of the voting share capital of an investee company? In thirteen countries, this practice is either required or represents the predominant practice. In seven countries, there is no requirement or general practice of preparing consolidated statements.

Is a statement of changes in financial position, that is, a funds statement, included in the financial report? In ten countries, a funds statement is required or usually included in the financial report. In the other ten countries surveyed, there is no general practice to present a funds statement.

Are research and development costs reported in the financial statements? In four countries, such practice is required or is generally found. In six countries it represents a minority practice. In ten countries it is rarely, if ever, found at all.

Many other differences in accounting and disclosure of items, such as deferred tax, leases, goodwill, foreign currency amounts, depreciation, extraordinary income, and expense, could be discussed. They could, and do, fill a book.

THE CAUSES OF THE PROBLEM

Why have these differences arisen? In some areas it is, of course, simply a matter of local standards being less developed than those the profession is accustomed to in the United States. But in other cases, there are more fundamental differences which result from the local business environment and from differing concepts of the nature and purpose of financial statements. Any attempt at harmonization which does not recognize these fundamental differences is doomed to failure.

In the United States, the profession is accustomed to the primary corporate document for financial disclosure being the annual shareholder report. Consequently, the entire framework of accounting principles and disclosure requirements is based on the perceived needs of shareholders and potential shareholders. In many other countries, it is evident that legislators and standard setters are increasingly oriented to other user groups, especially government and employees, and perhaps to a greater degree, society in general.

When tax authorities become involved in accounting, strange things do indeed happen in standard setting. We are not immune to this in the United States; the Internal Revenue Service's LIFO conformity rules, a singular contrivance in this country, can mandate accounting treatment of inventory. Vestiges of the old investment credit hassle remain. In the United Kingdom, capitalization of interest results in loss of tax relief and, consequently, it is not a popular accounting treatment. Some other governments go much further, literally requiring tax accounting rules to be used for financial reporting, even when this prevents the financials being anything like what Americans would describe as "fairly presented."

This author believes that we all understand the problems of mixing taxation incentives, policy, and politics with measurement standards for presenting the economics of business, yet in many countries there are only fiscally oriented standards — not GAAP as we know it.

Differences also result from uncoordinated local standard-setting activities in the absence of an agreed conceptual framework. Pragmatic "fix it" approaches have resulted in mutually contradictory results. Early in the 1970s, the United Kingdom adopted comprehensive tax allocation but, as a result of accelerated depreciation and other tax incentive programs, U.K. corporations soon found themselves building massive deferred tax balances which in no real sense represented liabilities. Their income statements showed half their profits being taken in tax, but their cash tax payments were minimal. The answer was to provide for deferred tax only to the extent that the relevant timing differences were likely to reverse — a standard prompted by pragmatic considerations.

In the United States (a less favorable tax climate for business, at least up to now), our objective has been a conservative bent to normalize earnings for tax effects or to match taxation cost with current revenues. Consequently, we retain comprehensive allocation. Both approaches have merit, but both can be criticized on logical as well as practical grounds.

RESULTS OF THE PROBLEM

The primary purpose of producing financial information is to enable economic decisions to be taken. In allocating resources, deciding in what to invest or whom to sell to, we need to make comparisons between different enterprises. Our task can be made more difficult by alternative and differing accounting standards. This holds true, of course, on an international basis just as within one country.

There always tends to be confusion and a lack of credibility when differing standards apply to the measurement of operating results. A classic example would be British Petroleum which follows U.K. accounting practices in its reporting. A few years ago, there was public financing in the United States when the U.K. government sold a portion of its holdings in British Petroleum. As you know, in prospectuses of the Securities and Exchange Commission (SEC), it is necessary to provide a reconciliation between operating results determined under the overseas company's regular method and U.S. GAAP. The different results in this case were startling: the last two years' reported income of this enormous company was reduced by 67 percent and 70 percent, respectively, on the U.S. basis. Since dividends actually paid were well in excess of the adjusted earnings, it did not present a very healthy picture. But the offering was successful and there never has been a great deal of concern over British Petroleum's foundering. Most of the substantial adjustment related to different currency translation standards, a subject which still does not evidence any real progress in narrowing national accounting differences.

Those working in multinational groups of companies are also well aware of another practical problem, the need to produce local financial statements (statutory accounts) for foreign affiliates. This process can be time consuming, expensive, and confusing when the foreign statements must be prepared using different accounting principles than those used for group reporting. Many U.S. international companies must often maintain the equivalent of four different sets of records for overseas subsidiaries: U.S. GAAP for consolidation, local GAAP for statutory reports, U.S. tax based, and local tax based. You can understand why producers and users of financial reports sometimes have great doubts concerning the standards-setting process throughout the world.

REDUCING THE DIFFERENCES

IASC, OECD, the United Nations (UN), the European Economic Community (EEC), and national standard-setting organizations — the number of bodies involved or influencing international standard setting seems to be too numerous. Are they really achieving useful results, or are the initial objectives of improving financial communications and enhancing international investment getting lost in a multitude of conflicting detailed requirements? Briefly, let us consider the activities, structure, and authority of the major international organizations interested in accounting standards.

International Accounting Standards Committee

The International Accounting Standards Committee represents some sixty professional accountancy bodies in approximately forty-five countries. It was established to encourage increased international harmonization and to assist countries lacking the resources needed to develop their own standards. It has so far issued thirteen standards and has six exposure drafts outstanding.

The IASC has been criticized for considering only noncontroversial subjects and for taking a "lowest common denominator" approach to standard setting. In truth, it does tend to permit a wide variety of practices, providing the practice adopted is disclosed. The IASC, however, now concerns itself with more contentious issues and in recent exposure drafts has issued more definitive positions on subjects such as leasing. Still, it will be a long road for the IASC in gaining worldwide consensus.

A more serious problem with the IASC is that it lacks teeth — the IASC's member bodies are often not responsible for standard setting and enforcement in their own countries. For example, the Financial Accounting Standards Board in the United States and the Accounting Standards Committee in the United Kingdom are not represented on the IASC. IASC could be much strengthened by obtaining more authoritative support in those countries. This author believes IASC should also attempt to broaden its base to encourage involvement of business, government, and other sectors in its work.

The Organization for Economic Cooperation and Development

OECD's "Guidelines for the Disclosure of Information by Multinationals" was issued in 1976; these guidelines recommended the principal items of information which should be included in the accounts of multinationals. In a way, it was a rather remarkable achievement for so many nations to sign an accord on fundamental items of information to be disclosed. For example, these recommendations provide for a comprehensive annual report by a multinational enterprise, including description of structure and main affiliates, operating results and sales by geographical area, significant capital investment by geographical area, statement of sources and uses of funds, accounting policies followed, and policies regarding intragroup pricing of products or services.

Many multinationals have responded by implementing these recommendations which often go well beyond national requirements. Regrettably, however, the very governments which developed and agreed to the recommendations have done little in implementing national

legislation. The EEC, for example, in its accounting directive has generally resisted the funds statement for some strange reason.

The guidelines have tended to be seen as codifying recommended practice in the area of corporate disclosure. A further limitation on their effectiveness in the field of harmonization is their concentration on disclosure, rather than on the underlying rules of measurement, which need to be harmonized if improvement is to be made in the comparability of reports.

In representing an advisory group before OECD, this author recommended that OECD establish a working group on accounting standards and that its objective be directed to:

1. Develop a body of knowledge regarding activities and plans of the various national governmental and private organizations involved in standard setting as well as international groups such as IASC and EEC.
2. Assess the relative effort and degree of development in accounting and reporting standards among member countries. Assess the principal conceptual differences in accounting and reporting standards.
3. Monitor the activities of the various standard-setting bodies to ascertain if new major divergencies and conflicts among national accounting standards are continuing to develop.
4. Develop a long-term program of oversight review to encourage the elimination of unnecessary divergencies in accounting requirements of member countries. The OECD should act as a catalyst or coordinator and not as a standard-setting body itself.
5. Develop guidance for more effective implementation of the guidelines for information disclosure.

Eventually these recommendations were adopted and there now is the Working Group on Accounting Standards comprising delegations from most of the twenty-four member OECD countries. These are governmental delegations; the United States, for example, is represented by staff from the State Department and the SEC. A good part of its initial efforts has been directed to developing guidance on the definition of items of disclosure recommended under the guidelines. So far, draft guidance has been prepared on sales, new capital investment, and average number of employees. Work is continuing on defining business segments, operating results, and research expenditure.

The Working Group has not yet been able to accomplish a great deal in respect of the overall harmonization question. It does regularly invite the IASC, Groupe d'Etudes of the EEC, and other organizations for consultation and advice. In the long run, the OECD may represent the best opportunity we have for an effective international forum since the accounting and reporting needs of the member countries are reasonably similar.

It is also important to bear in mind that it is unlikely that the private sector alone could be successful in promoting international standards. Government cooperation and support is necessary in many countries including those in the OECD. Unlike Canada, the United Kingdom, and the United States, for example, the private sector in many countries is not the effective standard-setting group. For this reason, it is quite useful to have an intergovernmental group, such as OECD, interested and involved.

United Nations

In 1974 the Economic and Social Council of the UN (ECOSOC) created the Commission on Transnational Corporations (the Commission) with responsibilities embracing a wide range of issues relating to transnational corporations. Among its interests is the development of a "code of conduct" for transnationals covering such topics as relationships with host countries, corrupt practices, transfer pricing, and disclosure of information.

The Commission is assisted in its work by the Centre on Transnational Corporations (the Centre) which is establishing a comprehensive system to accumulate and disseminate information on transnationals. In this connection, it is engaged in developing financial, statistical, and economic "profiles" of a large number of transnational corporations which will be made available to governments for their negotiations with transnationals and for other purposes. For convenience in its collection of information, the Centre is interested in the development of standardized accounting and reporting practices.

In response to a resolution of ECOSOC, the Secretary-General of the United Nations appointed a Group of Experts in International Standards of Accounting and Reporting early in 1976. The report of the Group of Experts was presented in May 1978, and included extensive detailed recommendations for minimum items for disclosure by transnationals. These proposals were closely modeled on U.S. disclosure practices but went further in the areas of reporting on segments of operations and on individual companies within groups.

In addition, there were extensive requirements for the disclosure of transfer pricing policies and certain nonfinancial information. The proposals concentrated solely on disclosure and did not address the problem of differing accounting principles. Although some delegations were unable to endorse many of the recommendations made, the Commission did recommend the establishment of a new ad hoc Intergovernmental Working Group of Experts on International Standards

of Accounting and Reporting which was instructed to report to the Commission in 1980 on "further steps to be taken in the field of international standards of accounting and reporting."

Final recommendations by the new Group of Experts have been delayed until later this year but discussions have ranged over the recommendations for disclosure by transnationals, participation by developing countries in the standard-setting process, and general concerns regarding the improvement of comparability of information provided by multinational corporations.

The UN, of course, does not have authority to set or enforce standards of disclosure or of accounting measurement. It could, however, make recommendations for its proposals to be incorporated into the legislation of member states. It remains a fundamental question whether an organization such as the UN should be involved in developing accounting standards. If standards are to be useful, they should be founded on a rational, objective, and neutral basis, and it is doubtful whether the UN is in a position to accomplish this. In addition, the imposition of detailed disclosure requirements, without harmonizing the widely diverse measurement standards used throughout the world, could result in apparently uniform information being prepared on noncomparable bases.

The performance of the Working Group so far is notable largely for its political rhetoric and the serious basic conflict of views between representatives of the developed nations and the Group of 77. The latter group seems determined to use the UN effort for purposes of demanding detailed disclosures by transnational enterprises which hardly fit within anyone's definition of general-purpose reporting.

It seems to this author that the UN's objectives would be better served through support of IASC and national accounting groups rather than through the UN's attempting to establish its own standards.

European Economic Community

One of the prime reasons for the establishment of the EEC was to facilitate trade and investment between the member countries. To this end, the EEC is attempting to reduce the differences between the various member states' legislation governing companies' activities and, in particular, to harmonize corporate disclosure requirements. Although the EEC does not have powers directly to impose legislation on the member countries, each member state does have an obligation to incorporate EEC directives into its national laws.

The EEC's harmonization activities do, of course, only have direct

impact within the EEC. However, as the EEC is the first supranational body to have significant authority in the area of accounting disclosure, it is interesting to observe its experience. Furthermore, EEC regulations are now beginning to have significant effects on the United States and other foreign multinational corporations operating in the EEC.

The Fourth EEC Company Law Directive, which relates to the accounts of most individual companies, was adopted in 1978 and is currently being passed into law by the member states. It governs the format and content of annual accounts and the valuation methods to be adopted for their preparation. The Fourth Directive will substantially increase disclosure requirements in most of the member states and will require major amendments to the format of annual reports.

However, because of long-established differing accounting practices in the individual states, the EEC has had to permit member states several significant options when drafting their national legislation giving effect to the directive. One example of this is the format of the profit and loss account. In most states, the amount of detail to be given will be greatly increased as a result of the directive, but full comparability of presentation will not be achieved since two possible formats of account will be permitted. One format analyzes costs by type of expense (for example, purchases of goods, wages, and salaries) while the other analyzes them by the purposes of the expenditure (cost of sales, distribution costs).

Proposals for the Seventh Directive, dealing with the preparation of consolidated accounts, were first published in 1976, and subsequently revised in 1979. Although a natural extension of the Fourth Directive, the Seventh Directive has caused considerable controversy due to its proposed introduction of novel consolidation concepts. The main disagreements have centered on the EEC's proposed definition of a group of companies and on the proposal for the preparation of EEC-wide subconsolidations by multinationals controlled from outside the EEC.

Representations have been made to the Commission by the American Chamber of Commerce in Brussels and others, noting the practical difficulties involved and also suggesting that the disclosures proposed for non-EEC multinationals may well not meet the EEC's objective of fair presentation. There are indications that the proposals may be substantially revised before final issuance, now expected in 1981; however, as EEC deliberations are not in general made in public, it is not possible at this time to predict the final outcome.

It should be understood that the EEC, while purporting to develop harmonization within its jurisdiction, can pose a serious obstacle to

development of worldwide standards. The experience in the Fourth and Seventh Directives indicates this difficulty. Other directives on company law and employee relations, now in proposed directive form, reflect a nationalistic point of view which may result in discriminatory aspects affecting non-EEC enterprises. The Departments of State and Commerce are following these developments closely from the U.S. perspective. A full-time mission is maintained in Brussels. Obviously, monitoring of international accounting developments should include EEC activities.

SUMMARY

Anyone concerned with international harmonization of accounting standards should be concerned with the possibility of overlapping efforts by the IASC, OECD, UN, and EEC. It is, however, a hopeful sign that most of those involved in the process seem to be aware of the dangers of duplicate efforts and contradictory requirements. This author hopes that political considerations will not lead the UN and EEC to complicate the work of the OECD in its program to bring governments and the private sector together in the accounting harmonization effort. If the rather basic OECD guideline items were to be adopted more universally by governments and enterprises, there would be considerable uplift in quality of reporting.

Where then do we go from here? Fully uniform worldwide GAAP and disclosure practices are probably not achievable in the foreseeable future, if ever. In fact, harmonization does not mean uniformity or "singing in unison." Determining what harmonization might mean would be a good project for someone. In any event, our primary objective should be to eliminate unnecessary differences by closer and more effective cooperation between the various standard-setting bodies. The aim should be to establish general agreement first on a few basic issues:

1. The nature and purpose of the three fundamental financial statements: balance sheet, income statement, and funds statement;
2. Abandonment of tax-based accounting for financial reporting;
3. Disclosure of accounting principles so that the reader can more readily identify differences in accounting practices;
4. Guidelines for consolidated or group accounts and for equity treated investments; and
5. Basic items of disclosure.

One particularly encouraging development recently has been the consultations between the United States, the United Kingdom, and

Canadian standard-setting bodies in relation to the revision of their standards for the treatment of foreign currencies. It remains to be seen whether these countries will be able to develop a common approach. It is clear the interest in trying to achieve closer international cooperation is widespread among business, educators, the accounting profession, and government.

The Implications of Transborder Data-Flow Development for the Accounting Profession

DAVID F. LINOWES*

Within the last few years, new and far-reaching challenges have been emerging for the accounting profession, business institutions, and even the democratic nations of the world. While we are benefitting from the exciting developments in telecommunications and computer technology, disturbing new protectionist initiatives are surfacing, undermining many of the commercial and political advances in international relations.

Many nations already have created, or are in the process of creating, barriers to the flow of data across their borders — information critical to the effective management of all organizations: business and government, international and local.

Technological developments in telecommunications and computers have been so revolutionary that it is difficult for persons of our generation to comprehend them. For example, presently 60,000 bits of information are being stored on a silicon chip the size of the head of a pin, and recently IBM reported that this capacity has been increased to a million bits on a square-inch silicon chip. The power of silicon is so remarkable it is literally transforming society. Yet next to oxygen, it is the most abundant element on earth.

While the use of the silicon chip has made remarkable advances in the storage of data, the satellite has revolutionized the transportation of that data. And, increasingly, satellites are becoming the basic

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means for business data transmissions. Last year, Satellite Business Systems, a partnership of IBM, the Communications Satellite Corporation, and Aetna Life and Casualty Co., placed its first satellite in the sky, marking a revolution in business communications. For the first time, a satellite was designed to be used exclusively to transmit corporate information. It has the capacity to transport 1.5 million bits of data per second, with the potential to carry 6.5 million bits. This compares to the average telephone line's capability of 9,600 bits per second.

Presently there are some 2,500 communications satellites in space, and their number is increasing each year. These satellites are more than 20,000 miles up in the sky, moving at the same speed of the earth. A combination of three of them can reach everyone in the entire world. They are being used in the normal course of business today by multinational corporations and banking institutions to transmit reports of business transactions and accounting records from one part of the world to another. National boundaries have no meaning with this electronic magic, and therefore are essentially ignored.

DIRECT IMPACT ON THE CPA

The data speeding through space are the ingredients from which the CPA molds services to clients and society, yet the data are subject to unauthorized electronic access without leaving any traces. Business organizations valuing the security of their accounting records and other business information are finding it difficult, if not impossible, to protect records from persons with ulterior motives.

Accounting practitioners are materially affected by these developments inasmuch as in our audit responsibilities, we are required to give credibility to financial statements. The potential for unauthorized, undetected access to accounting records makes it hardly possible to satisfy ourselves fully that the databank records have not been manipulated, not just from within a business enterprise or from next door, but from any place on our satellite-encircled globe.

There is an alarming growth of computer crime which, apart from the obvious losses to individual businesses and the economy as a whole, constitutes a danger to privacy in all of its aspects. As society grows increasingly dependent on computers, a fertile field opens to sophisticated thieves who have the technological know-how to tap, manipulate, and alter electronic information. Most computer programmers and other electronic data processing employees — there are well over two million nationwide — have access to some sort of confidential com-

puterized data and are technically capable of gaining access to that data without authorization. The sophistication involved in this new frontier of white collar crime is such that detection is very difficult and the episodes themselves border on the exotic. For example, Bertram Seidlitz was employed by Optimum Services, Inc., a Baltimore, Maryland, computer services firm that maintained classified files of the Federal Energy Administration. Seidlitz could dial OSI's telephone number, and by pushing secret passwords into a terminal connected to his telephone in Alexandria, Virginia, tap into their computer. He extracted forty rolls of FEA computer print-outs before he was caught.

IMPACT ON OUR NATIONAL LIFE

These technological developments are also having far-reaching impacts on the character and texture of our national life. The dangers stem not from any conspiracy to deprive us of our privacy and autonomy, but from the fact that our record-keeping technology — our capacity to collect, store, retrieve, and disseminate personal information — has developed so rapidly and explosively that there has been no time for the gradual evolution of a legal or social philosophy of information privacy. It was James Madison who warned over 200 years ago, "There is more abridgment of freedom of people by gradual and silent encroachment than by violent and sudden usurpations."

Before the advent of the computer, the bulk of records accumulated by a particular agency or company stayed with that institution. There was no mass transfer of information, if for no other reason than those of cost and physical inaccessibility. Also, it often was too costly to accumulate data, and, therefore, it was promptly destroyed or ignored. Today, however, with data being accumulated by scores of organizations and fed into databanks, more and more of the information is being shared with others, often without the knowledge of the individuals concerned. With split-second retrieval, anything that is ever recorded becomes immediately available; and with computer-to-computer linkage via satellite, anything put into the databank of one organization can be tied together with another organization's databank anywhere in the world. It is this linkage that has the potential for creating one of the greatest threats to our way of life.

Procedures that were acceptable and harmless during the slow-paced manual era are now something wholly different. It was Justice Frankfurter who observed that the history of American freedom is, in no small measure, the history of procedure. Both internal and external data procedures are within the domain of the accountant. He often

designs the systems, develops the manuals, and helps build in safeguards to provide security for the records. Because of this, society is beginning to look to the accountant for guidance in providing information privacy protection.

Accounting practitioners should be fully aware, therefore, that information and records clients collect, maintain, and use regarding individuals are under scrutiny, and that from every indication, client record protection practices will be subject to new forms of government regulation.

CONCERNS OF WORLD GOVERNMENTS

To deal with the evolving dilemma, the Congress of the United States enacted the Privacy Act of 1974. Among other things, it created the Privacy Protection Commission, which the author had the honor to chair. After two years of investigations, the commission prepared a 654-page report, containing 162 recommendations calling for a national public policy on privacy.[1] It was submitted to the president and the Congress in the summer of 1977. This report and the recommendations are the basis for the comprehensive privacy legislation now before Congress.

This legislation seeks to accomplish three main public policy objectives in relations between an individual and the organization — both business and governmental — with which he or she deals: to minimize intrusiveness, to maximize fairness, and to create a legitimate and enforceable expectation of confidentiality where such expectation is warranted.

Canadian Deputy Prime Minister Allan Gotlieb expressed his concern about the effects of data transmissions across that country's border more than five years ago. For Canada and the United States, information transferred in and out of the country without knowledge or control on the part of the jurisdiction concerned raises issues that prior to the communications revolution were barely perceptible, if they existed at all, he said. These questions involve human rights, property, economics, and security.

Continuing, Mr. Gotlieb emphasized, the one-way southward flow of Canadian data is seen to compete with principles of sovereignty and the free flow of information both at the domestic and international levels.

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[1] *Personal Privacy in an Information Society,* Report of the Privacy Protection Study Commission (Washington, D.C.: U.S. Government Printing Office, July 1977).

Presently the loss in foreign exchange to Canada to pay for this service is over $300 million a year, and it is projected to exceed $1 billion within five years. Job losses to the Canadian economy are estimated as high as 40,000.[2] Concerns have reached such proportions that recently one of the leading Canadian newspapers complained editorially, "The United States may soon own all our secrets — unless we start insisting that computerized information stay inside this border."[3]

The French are taking the position that information transactions are now an important part of international trade, yet they are not subject to a tariff. They argue further that processing of data abroad replaces French workers whose earnings would have been subject to their income taxes. Why should not France develop a taxing mechanism for information that flows into and out of the country? Such action, of course, could create chaos in world trade and international banking.

Developing nations often view transborder data-flow regulations as an important deterrent in their effort to become self-sufficient. Their argument, made by Ricardo A. C. Saur, executive secretary, Coordinating Committee for EDP Activities of Brazil, runs somewhat as follows.

Each developing nation must evaluate whether the introduction of the latest available technology will not cause a greater degree of dependence on developed nations, or extend the time to catch up. Inasmuch as there are not adequate resources available to do everything needed to modernize a nation, choices of allocation of those resources must be made.

New technology which furnishes direct social benefits should take substantial priority over technology which has no significant social consequences for the country as a whole. In applying this approach to transborder data flow, many developing nations have concluded that telecommunications and computer technology should be constrained, and therefore it is necessary to control international links offering such services.[4]

Because suitable orbits for communications satellites are limited and are rapidly filling, less technologically advanced nations more and

[2] These and other Canadian concerns were expressed by Canadian government officials at the International Conference of Information Ministers held in Ottawa, Canada, on September 21-24, 1980, in which the author participated.
[3] *The Toronto Sunday Star,* 8 July 1979.
[4] Reported at the World Conference on Transborder Data-Flow Policies sponsored by the Intergovernmental Bureau on Informatics in Rome, Italy, June 23-27, 1980, in which the author participated.

more are expressing concern. The frequency bands themselves are also becoming increasingly crowded with each new generation of satellites using higher and higher operating frequencies. Developing nations are fighting to have space in satellite orbits and frequency spectrums reserved for them even though there is no prospect of their being able to use them in the foreseeable future.

Increasingly, many sites are becoming transfer stations for knowledge and information. Whose laws have jurisdiction when data is in a country only for processing or even for retransmission? For example, if data is transmitted by a Polish national by way of American satellite to a British corporation, whose laws control and when? Is an American satellite more than 20,000 miles up in the sky within the jurisdiction of American courts?

There now has developed an international computerized banking system called SWIFT — Society for World Financial Information Transactions. This system permits banks on a worldwide basis to make loans almost instantaneously without transferring any currencies. Hundreds of thousands of transactions can be handled at one time and, because of its speed and global coverage, it operates essentially without national monitoring. In effect, a form of stateless currency is created, juggling massive sums of money through the atmosphere. The destabilizing impact on international financial markets can be enormous.

Global communications have already developed to the point that even if totalitarian regimes were to close all newspaper plants, general news, economic data, and military and government information could still continue to be transmitted to the far corners of the globe with little interruption.

Nations playing key global roles are applying more and more of their resources toward asserting their dominance in telecommunications and computer technology. A knowledgeable British observer is convinced that the kind of scramble for communication media underway today in the industrialized world is on a scale similar to the first arms race in the postwar era. The United States is at economic and technological war with the rest of the world, he argues.[5]

The use of satellite technology as a political weapon is increasingly becoming a major concern. During the height of the Iranian crisis, for example, President Carter suggested halting Iran's use of the ten Intelsat communication satellites. Since 70 percent of Iran's interna-

[5] Anthony Smith, *The Geopolitics of Information: How Western Culture Dominates the World* (Cambridge: Oxford University Press, 1980).

tional communications are served by these satellites, an interruption in transmission would have crippled Iran's banking, television, telephone, and airline scheduling functions.[6]

The political ramifications of future communication satellites are even more alarming. Tomorrow's satellites will be more adept at rerouting and controlling transmission among satellites and receiving stations, thus encouraging the use of satellite sanctions as a tool.

Power in the world is increasingly dependent upon information and all information has become extricably intertwined. Whoever collects, processes, and controls it will increasingly exercise dominance.

H. P. Gassman of the Organization for Economic Co-Operation and Development notes,

> It is no coincidence that the privacy laws in the various countries have all sprouted at the time of growing linkage between computer systems. The possibility of electronic linkage of various sources of personal information has caused a growing apprehension of the publics of all nations of the erosion of personal privacy. Such linkage permits the extended control by private and public organizations of the information environment of individual citizens.
>
> Such privacy legislation is in effect the beginning of regulation of the computer services field. Until now such organizations have enjoyed just about complete freedom.[7]

EFFORTS BY INTERNATIONAL ORGANIZATIONS

Because of the potential threats to the free flow of information throughout the world, some limited attempts are being made to try to harmonize the interests and concerns of the various nations.

Four international organizations — the Nordic Council, the European Economic Community, the Council of Europe, and the Organization of Economic Co-Operation and Development — all have been involved in trying to resolve this emerging dilemma without much success.

Among the more difficult areas to be resolved are the following:

1. Whether legal persons — that is, corporations and other organizations, and so on — should be given the same status as natural persons in data-protection laws. Several countries already do include legal persons along with individuals. The position of the United States has been strongly opposed to this approach.

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[6] William J. Broad, "No Go for Satellite Sanctions against Iran," *Science*, vol. 208 (16 May 1980): 685-86.

[7] Remarks at the International Conference on Transnational Data Regulation held in New York, November 28-30, 1978, in which the author participated.

2. The question of the inclusion of data other than personal is another area of concern. Many argue that any agency established by a country dealing with privacy protection for individuals should also be given jurisdiction over nonpersonal data.
3. Should all data, whether in electronic equipment or in manual records, be included? Although the problem of abuse has surfaced only since the advent of computer and telecommunications technology, many people believe that data in any form should be covered by the same laws and mechanisms.
4. Areas such as electronic funds transfer and rapidly developing electronic mail are also being considered for treatment by whatever institutions are established for transborder data-flow regulation. Should they be?[8]

This author thinks it is fair to say that data flow among nations is in a rather chaotic state today. At least seventeen democratic nations of the world have various kinds of data regulation laws on their books or are in various stages of consideration. Ironically, pressure is being exerted by some business interests to rush into transborder data regulation in order to alleviate the fear of growing impediments to international trade. Nevertheless, the conviction is increasing that it has now become necessary for all the democratic nations of the world to regulate the free flow of data across national borders just to assure that it will remain free. The lack of an adequate response to this issue by our government to date has gone from limited irritation, to concern, and even to alarm on the part of many nations throughout the world.

CONCLUSION

Because every wave of innovation in computer-information processing has been accompanied by drastic reduction in size and cost, organizations have been able to support more and more variations in information handling. As new computer applications have become technically and economically feasible, they in turn have spurred the computer industry to further advances. This reinforcing cycle of technological advances and their imaginative applications show no signs of abating. By the end of this century, the minuscule chip-based computer will be the single most technological force in existence.

Throughout history, societies have had to adjust when great tech-

[8] These areas of conflict were identified at the Symposium on Transborder Data Flows and the Protection of Privacy sponsored by the Organization for Economic Co-Operation and Development held September 20-23, 1977, in Vienna, Austria, in which the author participated.

nological breakthroughs occurred. It happened with the invention of the printing press, the steam engine, the electric light, and the automobile. One of the major convulsions in this generation is being triggered by telecommunications and computer technology.

What is needed at this time is for the dynamic forces driving innovations to be linked with the values of freedom — freedom of enterprise as well as personal freedom. The scientific wizardry that jeopardizes all aspects of freedom should now be directed to assisting in protecting it.

Until that occurs, however, as that part of the family of social scientists most intimately involved in all information systems, CPAs should assume responsibility by recognizing the threat and acting to minimize it wherever possible.

Systems that we design and information that we use within accounting firms should be disseminated only on a "need-to-know" basis. Data should not be transmitted to third parties without the subject's authorization — or at least without his or her knowledge. Clients and CPAs should collect only data that is relevant to make a business decision or to conduct the professional assignment. No secret records should be maintained. Wherever possible, subjects should be allowed to see their records to insure that errors are removed. When information is no longer needed, it should be destroyed. Data should be used only for the purpose for which it is collected.

The kind of threats being posed by these electronic miracles are not just to business corporations and the accounting profession, but to all who value individual freedom, and our democratic free-enterprise system. We in the leadership role of the accounting profession carry a unique opportunity to involve ourselves in this critical issue at this time.

An International Comparison of Investor Uses of Financial Statements

LUCIA S. CHANG and KENNETH S. MOST*

INTRODUCTION

In recent years, a considerable amount of accounting research has addressed itself to measuring the effect of accounting information on security prices.[1] This research originated in the observation of random walk theories of security price behavior. Explicit in the formulation of these efficient market theories is the proposition that investors use information concerning the issuers of securities to make their investment decisions, and that financial statements are one source of such information. On the basis of this assumption, researchers have attempted to test the effects of accounting data,[2] changes in methods of accounting,[3] and proposals of the Financial Accounting Standards Board[4] by studying the prices of affected securities before, during, and after the occurrence of specified events.

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[1] N. J. Gonedes and N. Dopuch, "Capital Market Equilibrium, Information Production and Selecting Accounting Techniques: Theoretical Framework and Review of Empirical Work," *Studies on Financial Accounting Objectives: 1974,* supplement to *Journal of Accounting Research,* vol. 12 (1974): 48-129.

[2] G. J. Benston, "Published Accounting Data and Stock Prices," *Empirical Research in Accounting: Selected Studies* (1967), supplement to *Journal of Accounting Research,* vol. 5 (1967): 1-54.

[3] Shyam Sunder, "Stock Price and Risk Related to Accounting Changes in Inventory Valuation," *Accounting Review* (April 1975): 305-15.

[4] Robert K. Eskew, "An Examination of the Association between Accounting and Share Price Data in the Extractive Petroleum Industry," *Accounting Review* (April 1975): 316-24.

However, other research directed specifically toward determining whether and how investors use financial statements for investment decisions has not so far confirmed this assumption underlying the efficient market hypothesis. Several studies (see the section regarding previous research on investor use of financial statements) have in fact concluded that investors do not use financial statements as information sources for investment decisions. If this is true, then the observed behavior of security prices cannot be attributed to accounting information.

This paper reports on a research project aimed at resolving this apparent contradiction. The objective of the research was to test the following hypothesis: *financial statements published as a part of corporate annual reporting are used for investment decisions.*

A related question is whether the decisions of investors can be investigated on the assumption that they constitute a homogeneous group. The literature is replete with references to "sophisticated" and "unsophisticated" investors, but research into the behavior of stock market prices does not reflect this dichotomy.

Potential users of corporate annual reports were classified into three user groups: individual investors, institutional investors, and financial analysts.

The research was therefore designed to assist in finding answers to the following questions:

1. Are user groups homogeneous, or are their members so diverse as to necessitate the identification of subgroups for this type of investigation?
2. Are there measurable differences between the user groups which account for the importance which they place upon financial statement information?

"EFFICIENT MARKET" RESEARCH

Efficient market research has grown from the observation that stock market security prices are not susceptible to prediction by economic forecasting techniques.[5] To explain this, finance theorists resorted to the price determination model of economic theory, in which price is a function solely of supply and demand and it is assumed that sellers and buyers have all the information they need to make rational market decisions.

The exact nature of this information assumption has been ques-

[5] E. T. Fama, "Efficient Capital Markets: A Review Theory and Empirical Work," *Journal of Finance* (May 1970): 383-417.

tioned, and the efficient market hypothesis may take one of three forms. The weak form of the hypothesis states that stock prices fully reflect all information contained in the historical pattern of prices; the semistrong form states that these prices reflect all public information, including that contained in financial statements; and the strong form states that these prices fully reflect all information, including nonpublic or "inside" information. For the purposes of this discussion, the particular form of the hypothesis is not relevant, and the authors assume the availability of published financial statements as one source of the information on which buyers and sellers may rely.

According to Benston, the studies which relate published financial statements with security prices lead to the conclusion that these statements are not useful, or alternatively, that the information they contain has been fully impounded in the price of the security prior to its publication.[6] Peasnell also asserts that these studies "on balance" are discouraging to accountants.[7] In spite of such observations, researchers continue to test security price movements for evidence of the impact of financial statement information, and some purport to find it there.[8]

Clearly, if research on investor behavior can establish that investors do not use financial statements as information for investment decisions, the conclusions of Benston and Peasnell are validated. On the other hand, if this research establishes that investors do use financial statement information, the work of those who continue to test security price movements is supported, and it may be possible to find explanations for contradictory findings. These explanations may lie in the characteristics of the different user groups: hence the significance of the two research questions posed earlier.

PREVIOUS RESEARCH ON INVESTOR USE OF FINANCIAL STATEMENTS

A literature survey revealed that little research has been conducted in this area, and that which has been published revealed contradictory findings. The most recent study was that of the Securities and Exchange Commission (SEC) in 1976-77.[9]

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[6] G. J. Benston, "Evaluation of the Securities Exchange Act of 1934," *Financial Executive* (May 1974).

[7] K. V. Peasnell, "The Usefulness of Accounting Information to Accounting," *ICRA Occasional Paper No. 1* (Lancaster, England: University of Lancaster, 1973).

[8] Ray Ball and Philip Brown, "An Empirical Evaluation of Accounting Income Numbers," *Journal of Accounting Research* (Autumn 1968): 159-77.

[9] *Report of the Advisory Committee on Corporate Disclosure to the Securities and Exchange Commission* (Washington, D.C.: Government Printing Office, 1974).

The earlier studies were those of Epstein, Baker and Haslem, and Stockholders of America in the United States, and Lee and Tweedie in the United Kingdom.

Epstein used a questionnaire for a national survey of individual common stock investors in the United States. He found that only 15 percent of respondents stated that they relied on annual reports as their primary source of investment information, compared with 48.8 percent who apparently relied on stockbroker's advice.[10]

Baker and Haslem used a questionnaire to survey individual common stock investors in the Washington, D.C., area. They were asked to indicate their most important sources of information in evaluating common stocks. Of the respondents, 46.8 percent rated stockbrokers as their most important sources of information while only 7.9 percent rated financial statements most important.[11]

On the other hand, Stockholders of America, Inc., a national nonprofit organization, reported quite different findings from its questionnaire survey of U.S. investors. To the question "How do you acquire information on a stock before investing?" 68 percent of respondents stated that they relied primarily on their own evaluation, although 63 percent indicated that they used stockbroker's advice. This evaluation included reading annual reports; 85 percent of the respondents answered that they studied the annual reports.[12]

Lee and Tweedie sent questionnaires to shareholders of one of the largest U.K. industrial companies. The responses indicated that most of the respondents regarded annual financial reports as an important source of information for investment decisions. Financial press reports were considered the most important of the other sources of information on companies. Stockbroker's reports were read by many stockholders but they were not considered as important a source as "occasional merger reports" or "half-yearly financial reports."[13]

The SEC used a questionnaire to survey 11,000 U.S. individual investors as part of the investigations of the Advisory Committee on

[10] Marc J. Epstein, *The Usefulness of Annual Reports to Corporate Shareholders* (Los Angeles: California State University Bureau of Business and Economic Research, 1975).

[11] H. Kent Baker and John A. Haslem, "Information Needs of Individual Investors," *Journal of Accountancy* (November 1973): 64-69.

[12] Stockholders of America, Inc., *A Stockholders of America Survey on Subjects of Concern to the Individual Investor* (Washington, D.C.: Stockholders of America, Inc., 1975).

[13] T. A. Lee and D. P. Tweedie, "Accounting Information: An Investigation of Private Shareholder's Usage," *Accounting and Business Research* (Autumn 1975): 280-91.

Corporate Disclosure. These investors each held less than 1,000 shares of stock in fifteen publicly held corporations. Table 8 of the Committee's Report, "Value Ranking of Information Types — All Investors," revealed that 50 percent of respondents rated financial statements "Extremely useful" and 36 percent, "Moderately useful"; only 3 percent rated them "Not at all useful."[14]

Finally, a firm of financial analysts, Duff and Phelps, Inc., was engaged by the public accounting firm of Arthur Andersen & Co. in 1975 to prepare a report on corporate annual reporting.[15] This report stated as a basic assumption that "shareholder reports . . . are the basic channel of communication with all investors." This assumption is compatible with the findings of Opinion Research Corporation in a 1974 study also commissioned by Arthur Andersen & Co., that " 'key publics' evidence a strong desire for more comparability, clarity and completeness in corporate financial reporting."[16]

RESEARCH DESIGN AND METHODOLOGY

A questionnaire survey of some 4,000 individual investors, 900 institutional investors, and 900 financial analysts was performed during 1976. To embrace a wide spectrum of respondents, the questionnaires were distributed in three countries, the United States, the United Kingdom, and New Zealand,[17] all three of which have large capital markets and well-organized stock exchanges which tend to function in a similar manner. In addition, the U.S. individual investors were divided geographically into Florida and the United States excluding Florida. This survey relied heavily on the use of control groups to assist the validation of research findings, and the international dimension was aimed at helping to isolate factors responsible for differences between user groups. The data presented and analyzed in this paper are those for the U.S. user groups; however, it will be noted where the findings differ from those of other groups.

The Florida sample of individual investors was randomly selected from the mailing list of a Florida office of a national stockbrokerage firm. A U.S. mailing list was purchased from a list company and was

[14] *Report of the Advisory Committee.*

[15] Duff and Phelps, Inc., *A Management Guide to Better Financial Reporting* (Chicago: Arthur Andersen & Co., 1976).

[16] Opinion Research Corporation, *Public Accounting in Transition* (Chicago: Arthur Andersen & Co., 1974).

[17] The authors acknowledge with thanks the collaboration of Professors Ali J. Osman of London and William J. Cotton of Canterbury, New Zealand, in this research.

warranted to be randomly selected from a list of investors in forty-nine states excluding Florida. The U.K. and N.Z. individual investors were randomly selected from the share register of a large public company and a share registrar firm, respectively. The U.S. institutional investors were randomly selected from lists in various directories as were the financial analysts.

Institutional investors and financial analysts in the United Kingdom were also randomly selected from directories, but the N.Z. samples representing 142 analysts and 169 institutional investors were believed to be a 100 percent sample of these categories in that country.

The same questionnaires, with minor changes to accommodate differences in the groups surveyed, were sent to the populations identified during approximately the same period (between the spring and the fall of 1976). Two of the individual investor questionnaire questions are appended to this paper. These questions were designed to elicit views on both the importance which the three groups placed on financial statements as a source of information for investment decisions, and also the perceived usefulness of this information source. Other questions were designed to provide ten investor/analyst characteristics, grouped into three categories: personal (age, income, and so on), investment activity, and education and training. The form of the questionnaires corresponds with that used by other researchers in this field.

One month after the first mailing to each user group in each country, a second questionnaire was mailed to those who did not respond to the first. A chi-square test performed on all questions between the first and second mailing responses indicated that on virtually all questions, there were no significant differences between the responses from the two mailings. On this basis, the results of the two mailings were assumed to be homogeneous. Exhibit 1 contains a summary and analysis of responses from the three groups of investors and analysts from the three countries. The proportion of each population responding was disappointingly small, but this appears to be typical of research of this type. "Technically, the results obtained represent only the views of the actual respondents of the three populations sampled."[18]

Respondents were asked to assess the importance which they placed on each of the questionnaire items by using a Likert-type five-point scale with one denoting the lowest, and five the highest, importance.

[18] Vincent C. Brenner, "Financial Statement Users' Views of the Desirability of Reporting Current Cost Information," *Journal of Accounting Research* (Autumn 1970): 159-66.

Exhibit 1. Analysis of Responses to Surveys

		Individual investors		*Institutional investors*		*Financial analysts*	
		# of responses	*% of questionnaires delivered*	*# of responses*	*% of questionnaires delivered*	*# of responses*	*% of questionnaires delivered*
United States	Florida	182	21.5				
	All other states	554	29.2	165	34.5	123	33.3
United Kingdom		113	11.3	84	30.9	76	23.4
New Zealand		85	28.3	63	37.3	62	43.4

Upon receipt of the returned questionnaires, the data were transferred to computer cards and tabulated. A number of parametric and nonparametric statistical tests were performed by a computer. Specifically, the chi-square test was used to test for nonresponse bias; frequency distributions were obtained; mean values were calculated and T-tests performed between groups to identify significant differences and to relate importance of information to user characteristics. Factor analysis and multidiscriminant and multivariate analysis were also used to help interpret the data. The data were further analyzed by a conservative F-test, a multiple range test (the Student-Newman-Keuls test), and the Goodman-Kruskal-Gamma measure of association, as well as other statistical tools.

FINDINGS CONCERNING IMPORTANCE OF FINANCIAL STATEMENTS

All three user groups in the three countries placed great importance on the corporate annual report as a source of information for investment decisions. Corporate annual reports were rated as the overall most important information source, except in the United Kingdom, where only individual investors and financial analysts failed to rate them most important, as did individual and institutional investors in New Zealand. However, two of these groups ranked the corporate annual report second and the other two, third. Exhibit 2 indicates the international ranking of information sources in order of relative importance. Significantly, in all countries, financial analysts placed greater importance (in terms of weightings) on corporate annual reports than did institutional investors, and the latter placed greater importance on them than did individual investors. Exhibits 3, 4, and 5 show the differences between the three groups of users in the three

countries in respect to all information sources included in the questionnaire.

Exhibit 2. Ranking of Information Sources in Order of Relative Importance

	United States			*United Kingdom*			*New Zealand*		
	A	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*
Corporate annual reports	1	1	1	3	1	2	3	2	1
Newspapers and magazines	2	3	8	1	2	5	1	5	7
Advisory services	3	2	5	5	5	8	5	3	8
Stockbroker's advice	4	4	–	2	3	–	2	1	–
Proxy statements	5	5	7	4	4	7	4	4	6
Advice of friends	6	6	–	6	6	–	6	6	–
Tips and rumors	7	7	–	7	7	–	7	7	–
Prospectuses	–	–	2	–	–	3	–	–	5
Communications with management	–	–	3	–	–	1	–	–	3
Interim reports	–	–	4	–	–	4	–	–	2
Press releases	–	–	6	–	–	6	–	–	4

A = Individual investors.
B = Institutional investors.
C = Financial analysts.

Exhibit 3. Intercountry Comparison of Importance of Individual Investors' Information Sources

	More important
United States: United Kingdom	
Advisory services	United States
Corporate annual reports	United States
Newspapers and magazines	United Kingdom
Tips and rumors	United Kingdom
United States: New Zealand	
Stockbroker's advice	New Zealand
Advisory services	United States
Newspapers and magazines	New Zealand
Proxy statements	New Zealand
United Kingdom: New Zealand	
Corporate annual reports	New Zealand

Exhibit 4. Intercountry Comparison of Importance of Institutional Investors' Information Sources

	More important
United States: United Kingdom	
Stockbroker's advice	United Kingdom
Advisory services	United States

Exhibit 4 (cont.)

	More important
Corporate annual reports	United Kingdom
Newspapers and magazines	United Kingdom
Proxy statements	United Kingdom
United States: New Zealand	
Stockbroker's advice	New Zealand
Newspapers and magazines	New Zealand
Proxy statements	New Zealand
United Kingdom: New Zealand	
Stockbroker's advice	United Kingdom
Corporate annual reports	United Kingdom

Exhibit 5. Intercountry Comparison of Importance of Financial Analysts' Information Sources

	More important
United States: United Kingdom	
Advisory services	United States
Corporate annual reports	United Kingdom
Communications with management	United Kingdom
United States: New Zealand	
Proxy statements	New Zealand
Corporate press releases	New Zealand
Prospectuses	United States
United Kingdom: New Zealand	
Advisory services	New Zealand
Proxy statements	New Zealand
Corporate press releases	New Zealand
Communications with management	United Kingdom

Even more uniform was the response to the question asking users to rate the importance of corporate annual report items. All three user groups in all three countries rated the financial statements more important than any other part of the report. Exhibit 6 shows the rankings of the various parts of the financial statements, and exhibit 7, the ranking of the other parts of the corporate annual report items. There was more consistency in the ranking of financial statement parts than in the ranking of other parts of the corporate annual report. Again, financial analysts rated financial statement parts of the corporate annual report highest, followed by institutional investors and individual investors, in that order. Exhibits 8, 9, and 10 show the differences between the three groups of users in the three countries in

respect to all corporate annual report items included in the questionnaire.

Exhibit 6. Ranking of Financial Statement Parts in Order of Relative Importance

	United States			*United Kingdom*			*New Zealand*		
	A	*B*	*C*	*A*	*B*	*C*	*A*	*B*	*C*
Income statement	1	1	1	1	1	1	1	1	1
Balance sheet	2	2	2	2	1	1	2	3	2
Statement of changes in financial position	3	3	3	3	3	3	3	2	3
Accounting policies	5	5	4	5	4	4	4	4	4
Other footnotes	4	4	5	6	5	5	6	5	4
Auditor's report	6	6	6	4	6	6	5	6	6

A = Individual investors.
B = Institutional investors.
C = Financial analysts.

Exhibit 7. Ranking of Other Corporate Report Items in Order of Relative Importance — Other Parts

	Individual investors			*Institutional investors*			*Financial analysts*		
	U.S.	*U.K.*	*N.Z.*	*U.S.*	*U.K.*	*N.Z.*	*U.S.*	*U.K.*	*N.Z.*
Summary of operations for the last 5 to 10 years	1	1	1	1	4	2	2	4	1
Sales and income by product line[1]	2	3	3	2	2	3	1	1	4
Management's discussion and analysis of summary of operations	3	2	2	4	1	1	4	2	2
Form 10-K report[2]	4	5	5	3	5	5	3	5	5
President's letter[3]	5	4	4	5	3	3	5	3	3
Pictorial material	6	6	6	6	6	6	6	6	6

[1] "Sales and profits by product line" in the United Kingdom and New Zealand.
[2] "Annual return filed with registrar of companies" in the United Kingdom and New Zealand.
[3] "Chairman's letter" in the United Kingdom and New Zealand.

Exhibit 8. Intercountry Comparison of Importance of Corporate Annual Report Items — Individual Investors

	More important
United States: United Kingdom	
President's letter	United Kingdom
Balance sheet	United States
Income statements	United States
Statement of changes	United States
Accounting policies	United States

Exhibit 8. (cont.)

	More important
Other footnotes	United States
Auditor's report	United States
Summary of operations (buying)	United States
Management's discussion	United States
Sales and income by product line	United States
Form 10-K	United States
United States: New Zealand	
President's letter (holding/selling)	United States
Balance sheet	United States
Income statement	United States
Statement of changes	United States
Accounting policies	United States
Other footnotes	United States
Auditor's report	United States
Summary of operations (buying)	United States
Sales and income by product line	United States
Form 10-K	United States
United Kingdom: New Zealand	
None	

Exhibit 9. Intercountry Comparison of Importance of Corporate Annual Report Items — Institutional Investors

	More important
United States: United Kingdom	
President's letter	United Kingdom
Accounting policies	United States
Other footnotes	United States
Auditor's report (buying)	United States
Summary of operations	United States
Sales and income by product lines (buying)	United States
Form 10-K	United States
United States: New Zealand	
President's letter	New Zealand
All other items except pictorial material, statement of changes, and management's discussion of operations	United States
United Kingdom: New Zealand	
Balance sheet	United Kingdom
Profit-and-loss account	United Kingdom
Accounting policies	United Kingdom
Other footnotes	United Kingdom
Auditor's report	United Kingdom
Sales and income by product lines (buying)	United Kingdom

Exhibit 10. Intercountry Comparison of Importance of Corporate Annual Report Items — Financial Analysts

	More important
United States: United Kingdom	
President's letter (buying)	United Kingdom
Pictorial material	United States
Statement of changes (buying)	United States
Accounting policies	United States
Other footnotes	United States
Auditor's report (buying)	United States
Summary of operations	United States
Sales and income by product line	United States
Form 10-K	United States
United States: New Zealand	
President's letter	New Zealand
Pictorial material (holding/selling)	United States
Statement of changes	United States
Accounting policies	United States
Other footnotes	United States
Auditor's report	United States
Management's discussion (buying)	United States
Sales and income by product line	United States
Form 10-K	United States
United Kingdom: New Zealand	
Balance sheet (holding/selling)	United Kingdom
Summary of operations	New Zealand
Sales and income by product line (holding/selling)	United Kingdom
Annual return	United Kingdom

ARE FINANCIAL STATEMENTS USED?

To test the hypothesis, that is, to determine that financial statements are used for financial decisions, the authors first attempted to validate the proposition that investors and financial analysts place importance on this information source. However, in the absence of a knowledge of investors' and analysts' decision processes, the authors can only infer from the data obtained that this information source is actually used.

Such inference rests on the following observations:

1. Financial statements as such are perceived as the most important information source. It is inconsistent with this conclusion to assert that such information is not actually used.
2. The subjective features of the corporate annual report (the pictorial material and the president's letter to stockholders) are prima facie unlikely to be used for investment decisions, and were rated least important by all respondents.
3. Financial analysts and institutional investors rated financial state-

ments more important than did individual investors. If we assume that the objective of both financial analysts and individual investors is to make investment decisions, it is logical to infer that they use this information source. This conclusion is supported by nonacademic observations such as those summarized in an article in the *Wall Street Journal* dated January 22, 1979.[19]

4. The theory of investment suggests that the investment decision involves consideration of three main variables: future earnings, security of capital, and prospective net cash flows. Additional indirect evidence of use is provided by the data underlying the rankings in Exhibits 6 and 7. To estimate future earnings, the investor or analyst would require income statement data, hence the perceived importance of the income statement. To analyze security of capital, the investor or analyst would require asset and liability data, thus the perceived importance of the balance sheet. To estimate capital interest and dividend flows, the analyst would require past changes in financial position as a point of departure, hence the importance of this statement.

5. A most interesting observation arising from this research lends additional support to the hypothesis. Users were asked to rate corporate annual report items *separately* for "buy decisions" and for "hold/sell decisions." Statistical analyses revealed that the importance of financial statements was viewed as equal for these two different types of decisions. Thus, the findings on importance cannot be separated from conclusions concerning use by reference to the "stewardship" argument which asserts that financial statements are primarily used for validating past buy decisions.

It is believed that the evidence provided by the data obtained and the inferences drawn support the hypothesis.

DIFFERENCES BETWEEN THE THREE USER GROUPS

The questionnaire asked respondents to provide answers to ten questions designed to identify subgroups according to three general categories: investment activities, personal characteristics, and education and training. Analysis of the responses revealed that financial analysts and institutional investors were homogeneous groups in respect to their occupations as well as their level of education, major in college, and formal training in accounting, finance, or stock market investing. This analysis did not produce evidence of any homogeneity on the

[19] "Ed Miller's New Paper Shows Why Investors in Securities Win by Playing 'Losers' Games."

Exhibit 11. Individual Investor Characteristics

	% of Respondents			
	Florida	*U.S.*	*U.K.*	*N.Z.*
1. Age				
Under 44	39.1	14.0	8.3	35.4
45–65	54.9	65.0	49.0	45.2
65 and older	6.0	21.0	42.7	19.4
2. Annual income				
under $5,000	} 1.8	} 0.4	20.2	31.6
$ 5,000–$ 9,999			34.3	21.5
$10,000–$19,999	14.7	3.2	35.4	35.4
$20,000–$39,999	47.2	21.7	9.1	7.6
$40,000 and over	36.3	74.7	1.0	3.8
3. Occupation				
Investment related	29.9	54.6	21.1	17.0
Not related	70.1	45.4	78.9	83.0
4. Amount of portfolio owned				
Less than $10,000	39.0	11.5	26.0	53.6
$10,000–$49,999	28.3	20.4	52.0	34.1
$50,000–$99,999	15.7	16.4	10.0	7.3
Over $100,000	17.0	51.7	12.2	4.9
5. Amount invested in common stocks				
Less than $10,000	45.4	14.9	33.0	62.5
$10,000–$49,999	31.6	24.0	46.0	30.0
$50,000–$99,999	12.4	17.4	11.0	2.5
Over $100,000	10.6	43.3	10.0	5.0
6. Experience in common stock investment				
Under 5 years	21.4	3.3	.9	5.9
5–9 years	24.9	11.6	12.8	36.5
10–19 years	32.9	29.5	35.8	31.8
20 years and more	20.8	55.5	50.5	25.9
7. Trades made in the past year				
None	16.7	15.2	25.2	22.6
1–9	47.0	64.2	66.4	52.4
10–19	14.3	12.2	5.6	16.7
Over 20	22.0	8.4	2.8	8.4
8. Education				
Less than high school	4.4	1.5	44.8	33.3
High school graduate	8.9	3.4	11.4	9.5
Some university	15.6	14.0	12.4	21.4
Graduate	71.1	81.1	31.5	35.7
9. Major in college				
Accounting or business administration	46.2	52.8	14.3	32. 4
Other	53.8	47.2	85.7	67.6
10. Training in finance or accounting				
Yes	55.2	64.3	26.4	31.7
No	44.8	35.7	73.6	68.3

part of individual investors. Thus, from the viewpoint of this investigation, it was found that the individual investor group could not be treated as homogeneous, suggesting further research to stratify this user group for the purpose of deriving more reliable statistics. Individual investor characteristics are summarized in exhibit 11.

As previously stated, financial analysts, as a group, placed a higher rating on the importance of financial statements than did institutional investors, and the latter again rated this information source higher than did individual investors. These differences suggested the examination of the individual characteristics of the "professionals" (financial analysts and institutional investors) to determine what common characteristics were shared by these groups. The two groups were highly comparable in terms of educational background and training in accounting (see exhibit 12).

Exhibit 12. Financial Analysts and Institutional Investors Comparison of Education and Training in Accounting

	Figures in percentages					
	United States		*United Kingdom*		*New Zealand*	
	Financial analysts	*Institutional investors*	*Financial analysts*	*Institutional investors*	*Financial analysts*	*Institutional investors*
Education						
Degree in business	85.4	80.9	50.0	46.2	46.6	40.0
Other	14.6	19.1	50.0	53.8	53.4	60.0
	Figures in quarter hours of instruction (United States only)[1]					
Training in accounting						
None	10.0	11.2				
Significant	90.0	88.8				

[1] Responses from the United Kingdom and New Zealand did not provide this data.

To correlate the ratings of individual investors with their education and accounting training, individual investors were divided into two subgroups, one of which majored in accounting or business administration. The subgroup which was comparable to the financial analysts and institutional investors rated all components of the annual report higher than the other subgroup, except for pictorial materials. The financial statements were significantly more important to the former subgroup, except for the statement of changes in financial position. The marked

difference in rating accounting policies and other footnotes is particularly noteworthy.

The individual investors were also divided into a subgroup with formal training in accounting, finance, or stock market investing, and a subgroup without such training. The ratings of these two subgroups were also calculated and subjected to T-tests. The results confirmed the same findings and were, if anything, more conclusive. Individual investors were then classified by occupation, and those with investment-related occupations (presidents and vice presidents, managers, financial executives, stockbrokers, CPAs, and accounting professors) were combined into one subgroup. It was found that this subgroup

Exhibit 13. Significance of Differences between Individual Investors' Backgrounds and Their Views on the Importance of Corporate Annual Report Items — U.S. Survey

Corporate annual report items		*Major in college*	*Investment training*	*Occupation*
President's letter	B.D.			
	H. or S.D.			
Pictorial material	B.D.			
	H. or S.D.			
Balance sheet	B.D.	*	*	**
	H. or S.D.			*
Income statement	B.D.	**	*	*
	H. or S.D.	**	*	*
Statement of changes in financial position	B.D.			
	H. or S.D.			
Accounting policies	B.D.	**	**	**
	H. or S.D.	**	**	*
Other footnotes	B.D.	**	**	**
	H. or S.D.	**	**	**
Auditor's report	B.D.		**	**
	H. or S.D.	**		**
Summary of operations for the last 5 to 10 years	B.D.			
	H. or S.D.			
Management's discussion and analysis of the summary of operations	B.D.			
	H. or S.D.			
Sales and income by product line	B.D.	**	*	
	H. or S.D.			
Form 10-K report	B.D.	*	*	**
	H. or S.D.		*	**

B.D. = Buying decision.
H. or S.D. = Holding or selling decisions.
* Significant at level of 0.05.
** Significant at levels of 0.05 and 0.01.

rated financial statement items higher than did the other subgroups, again with the exception of the statement of changes in financial position. This observation confirms Epstein's finding that "a shareholder's view of the usefulness of the various items in the annual report is significantly dependent on the shareholder's previous employment in accounting or finance."[20]

Exhibit 13 indicates the significant differences found by these T-tests by using asterisks. In all cases, an asterisk denotes that the more sophisticated subgroup of individual investors rated the corporate annual report item more highly than did the unsophisticated subgroup.

CONCLUSION

It has been suggested that investors do not use the information presented in published financial statements for their investment decisions. This suggestion casts doubt upon the methodology of accounting research aimed at determining the effect of accounting numbers on stock market prices. To resolve this difficulty, an extensive investigation of investors' and financial analysts' views on the importance of financial statements for investment decisions was undertaken. The questionnaire through which this investigation was conducted was designed to permit the testing of the hypothesis that financial statements published in the United States are used for investment decisions. To control this experiment, similar questionnaire surveys were conducted in the United Kingdom and New Zealand.

The responses to these surveys showed a strong belief in the importance of corporate annual reports as a source of information for investment decisions and an even stronger belief that the most important parts of the corporate annual report for this purpose were those pertaining to the financial numbers. This finding did not differ when "buy" decisions were compared with "hold/sell" decisions. Responses to particular questions indicate clearly that this type of information is used for investment decisions. However, a conclusive answer on this point must await further research on investor and financial analysts' decision processes.

The investigation included a study of the composition of three financial number user groups: individual investors, institutional investors, and financial analysts. While the characteristics of the last two groups supported their classification as homogeneous, the individual investor group was found to be very diverse. It is probable, therefore,

[20] Epstein, *Annual Reports*, p. 50.

that an explanation for different findings by different researchers investigating investor uses of financial numbers lies in the composition of the sample surveyed. This observation should be useful for further research directed to this type of study.[21]

APPENDIX: SURVEY QUESTIONS DISCUSSED IN THIS PAPER

When making decisions about buying, holding, or selling common stocks, what are your important sources of information?

A. Stockbroker's advice
B. Advisory services
C. Corporate annual reports
D. Newspapers and magazines
E. Proxy statements
F. Advice of friends
G. Tips and rumors
H. Other

In making decisions about buying, holding, or selling common stocks, how do you rate the following parts of corporate published annual reports?

A. President's letter
B. Pictorial material
C. Balance sheet
D. Income statement
E. Statement of changes in financial position
F. Accounting policies
G. Other footnotes
H. Auditor's report
I. Summary of operations for the last five to ten years
J. Management's discussion and analysis of the summary of operations
K. Sales and income by product line
L. Form 10-K report

[21] See also Barry Cushing, "On the Possibility of Optimal Accounting Principles," *Accounting Review* (April 1977): 308-21; Stanley F. Biggs, "Decision Process Models of Financial Analysts" (Paper presented at the 1978 Annual Meeting of the American Accounting Association, Denver, Colorado, August 21, 1978); and Alan P. Mayer-Sommer, "Understanding and Acceptance of the Efficient Markets Hypothesis and Its Accounting Implications," *Accounting Review* (January 1979): 88-106.

The Harmonization of International Accounting Standards, 1973-1979

R. D. NAIR and WERNER G. FRANK*

In the decade of the 1970s, serious attempts were made to harmonize international accounting practices. This effort was deemed important because the growth of international trade and of multinational corporations necessitated the comparison of accounting data across national boundaries. Differences which existed in accounting practices constituted a barrier to international communication of valid financial data.

An assessment of these efforts at harmonization now needs to be made. Sufficient time has elapsed, a large number of accounting issues have been addressed in this effort, and enough empirical data are now available for such an assessment to be neither premature nor impractical. This assessment is particularly necessary because the barriers to harmonization are considerable. Economic, social, and political environments of nations differ, and these influences may lead to corresponding differences in accounting practices. Frank, and Nair and Frank found that underlying environmental variables were closely associated with groupings of countries based on their accounting practices.[1] Nair and Frank state the implications of such a finding are

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The authors express their appreciation to Thomas J. Linsmeier for his comments on an earlier draft of this paper.

[1] Werner G. Frank, "An Empirical Analysis of International Accounting Practices," *Journal of Accounting Research* (Autumn 1979): 593-605; and R. D. Nair and Werner G. Frank, "The Impact of Disclosure and Measurement Practices on International Accounting Classifications," *Accounting Review* (July 1980): 426-50.

that "reaching the goal of harmonization may be difficult because, given the . . . association, countries may be reluctant to make a change in accounting practices so long as the underlying environmental variables are significantly different."[2] It is of interest to see whether attempts at harmonization have succeeded despite such hurdles. In spite of these obstacles, the growing interdependence of countries and the growing commonality of worldwide economic conditions might have provided an added impetus to the trend toward harmonization.

The authors find in this study that the attempts at harmonization of accounting practices have met considerable success. The study isolates those practices on which progress has been made; relates those practices to the pronouncements of the major international standards-setting organization, the International Accounting Standards Committee (IASC) ; and examines which countries have made changes regarding those accounting practices. The authors also find that practices adopted in the United States seem to have had a considerable influence on the direction taken in the international accounting standard-setting process.

The first section of this study describes the institutional efforts directed toward harmonization. The second section describes the data sources used in this study, the accounting practices which were studied, and the countries which were examined. The third section details the methods of analysis which were used and the results of those analyses. The next section presents the analysis of national involvement in harmonization, and the final section presents the conclusions of this study.

EFFORTS AT HARMONIZATION

Several institutions have addressed the problem of differences in accounting standards between nations and the need to eliminate all unnecessary differences and to understand better those differences which are justified. A discussion of such efforts can be found in Cummings and Chetkovich[3] and Berton.[4] The most important of these institutions is undoubtedly the IASC, established in 1973 by the accounting bodies of nine countries: Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom and Ire-

[2] Nair and Frank, "Disclosure and Measurement Practices."

[3] Joseph P. Cummings and Michael N. Chetkovich, "World Accounting Enters a New Era," *Journal of Accountancy* (April 1978): 52-61.

[4] Lee Berton, "Arthur Young Professors' Roundtable: The International World of Accounting," *Journal of Accountancy* (August 1980): 74-79.

land (jointly), and the United States. At present, IASC's board consists of a representative from each of the founding countries and two representatives selected for members admitted after 1973. Members of the IASC have as their goal to ensure (1) that conformity exists between accounting standards in their own countries and those of the IASC, (2) that independent auditors examine financial statements for compliance with these standards, and (3) that noncompliance is either disclosed in the statements, or is referred to in the audit report. A discussion of the working procedures of IASC can be found in a publication from Deloitte Haskins & Sells.[5]

The authors have restricted their study to the first ten Statements of International Accounting Standards. These ten standards, listed in exhibit 1, were issued during the period for which the authors have survey data on the prevalent accounting practices in a wide range of countries, 1975 to 1978.[6]

Exhibit 1. IASC Statements of International Accounting Standards Issued Prior to January 1, 1979

(Date of issuance in parentheses)

No. 1 — Disclosure of Accounting Policies (January 1975)
No. 2 — Valuation and Presentation of Inventories in the Context of the Historical Cost System (October 1975)
No. 3 — Consolidated Financial Statements (June 1976)
No. 4 — Depreciation Accounting (October 1976)
No. 5 — Information to Be Disclosed in Financial Statements (October 1976)
No. 6 — Accounting Responses to Changing Prices (June 1977)
No. 7 — Statement of Changes in Financial Position (October 1977)
No. 8 — Unusual and Prior Period Items and Changes in Accounting Policies (February 1978)
No. 9 — Accounting for Research and Development Activities (July 1978)
No. 10 — Contingencies and Events Occurring after the Balance Sheet Date (October 1978)

[5] Deloitte Haskins & Sells, *International Accounting Standards Committee, Summary of Activities, January 1975-January 1980* (Deloitte Haskins & Sells, 1980).

[6] The most recent survey the authors use describes the accounting practices in use as of January 1, 1979. Although IASC Statements 7 to 10 became effective for financial statements covering periods beginning on or after January 1, 1979, they were issued from two to fourteen months prior to this date. The authors feel that if the IASC does, in fact, influence accounting practices, it is reasonable to assume that firms would begin to move toward recommended practices as soon as the IASC statements are issued.

An examination of these standards shows that many of them are quite similar to the authoritative pronouncements on those topics in the United States, although differences of varying degrees do exist. For example, with respect to valuation of inventories in the context of historical cost, IASC *Statement No. 2,* "Valuation and Presentation of Inventories," states that valuation should be at the lower of historical cost and net realizable value. The first-in, first-out or weighted-average methods are preferred, although the last-in, first-out or base-stock methods are also permitted. The treatment of unusual and prior period items by IASC is similar to the treatment outlined by the Accounting Principles Board (APB) in *Opinion No. 9,* "Reporting the Results of Operations," rather than the more stringent requirements of *Opinion No. 30,* "Reporting the Results of Operations," and *Statement of Financial Accounting Standards No. 16,* "Prior Period Adjustments," of the Financial Accounting Standards Board (FASB).

On the other hand, IASC required in June 1977, in *Statement No. 6,* "Accounting Responses to Changing Prices," that if no procedures had been adopted to show the impact of changing prices, whether of general or specific prices or both, that fact should be disclosed. In *Statement No. 9,* "Accounting for Research and Development Activities," IASC also permits deferral, and subsequent amortization, of research and development costs if certain criteria are satisfied, contrary to FASB *Statement of Financial Accounting Standards No. 2,* "Accounting for Research and Development Costs."

In sum, of the ten pronouncements, only the two dealing with changing prices and research and development can be regarded as being substantially in conflict with the U.S. posture on those topics at the time the standards were issued by the IASC. This is not surprising considering that five countries — Canada, Germany, Japan, Mexico, and the Netherlands — of the original nine members of IASC from 1973 were identified by Frank to be members of the "U.S. model."[7] In other words, these other countries followed accounting practices very similar to those in the United States. The authors would, therefore, expect the U.S. influences to prevail on IASC.

DATA SOURCES

The data for the analyses were drawn from three Price Waterhouse surveys of accounting principles and reporting practices in different countries, the first of which was published in 1973, the second in 1975,

[7] Frank, "International Accounting Practices."

and the third in 1980.[8] These surveys constitute an important data source for a longitudinal study of change such as this one, especially since the time span of the three surveys corresponds with the existence of IASC.

The Price Waterhouse survey data were compiled from information provided by their various offices around the world. Uniform procedures were used worldwide in collecting and compiling the data. Strenuous efforts were made to ensure accuracy of the data. The firm also made a conscious effort not to bias the responses in favor of the accounting practices of its own clients or its own views on the desirability of a given practice. However, in countries where a lack of publicly available information prevents an assessment of the degree of conformity of a given practice, the response represents the best judgment of the Price Waterhouse people in those countries. Similarly, judgment was used when a diversity of practice existed in a country. Moreover, the format of the survey responses makes it impossible to detect local variations in practice which may be of importance.

All responses were based on requirements applied to financial statements prepared for the shareholders of profit-oriented firms which issue their statements to the general public. The responses were also based on any other document which a firm is required by law to produce as part of its annual report to shareholders. It should be noted that the firms whose practices are surveyed may not themselves be comparable across countries. For example, many of the firms in one country may be involved in extracting natural resources, agriculture, or in the retailing industry while in another, manufacturing firms may constitute the major sector. However, the firms from a given country whose practices are surveyed are likely to be comparable over time. These shortcomings of the data should be kept in mind when evaluating the results. These limitations could not be corrected by the authors, who nevertheless feel that the value of the data, especially for a longitudinal study such as this, far outweighs their defects.

Although the procedures for collecting the data have been consistent over time, the number of countries in the survey, the type and number of questions asked, and the nature of the possible responses have changed. The methods for correcting for these changes are discussed next.

[8] Price Waterhouse International, *Accounting Principles and Reporting Practices* (Canada: Price Waterhouse, 1973); idem., *Accounting Principles and Reporting Practices* (Canada: Price Waterhouse, 1975); and idem., *International Survey of Accounting Principles and Reporting Practices* (Scarborough, Ontario: Butterworths, 1979).

The 1979 survey included sixty-four countries whereas the 1975 and 1973 surveys included forty-six and thirty-eight countries, respectively. The current study concentrated on the thirty-seven countries which were common to all three surveys because these were the countries for which comparisons at the three points in time could be made. These countries are listed in exhibit 2.

Exhibit 2. Countries Common to 1973, 1975, and 1979 Price Waterhouse Surveys

Argentina	Ireland	Philippines
Australia	Italy	Singapore
Bahamas	Jamaica	South Africa
Belgium	Japan	Spain
Bolivia	Kenya	Sweden
Brazil	Mexico	Switzerland
Canada	Netherlands	Trinidad and Tobago
Chile	New Zealand	United Kingdom
Colombia	Pakistan	United States
Fiji	Panama	Uruguay
France	Paraguay	Venezuela
Germany	Peru	Zimbabwe
India		

The number of accounting practices surveyed also changed; there were 233 practices in the 1973 survey, 264 in 1975, and 267 in 1979. In addition, not all the practices surveyed in a given year were included in subsequent surveys. Finally, the form in which some questions were asked also changed from one survey to the next. To ensure a consistent and comparable data set, the authors identified 131 practices which had been included in all three surveys.[9] In terms of general categories, these 131 practices could be classified as follows:

Broad concepts	7 practices or concepts
Accounting policies	2
Fixed assets and depreciation	25
Inventories	16
Investments	6
Receivables and liabilities	11
Long-term liabilities	3
Shareholders' equity	14
Other balance-sheet items	6
Income statement	18
Consolidations	16
Foreign currency	6
Directors' activities	1
	131 practices or concepts

[9] A complete list of these practices is available from the authors.

This selection procedure had the effect of ignoring changes with respect to certain accounting practices which were surveyed in 1979 but not in 1973 or 1975. Such issues were not as noteworthy during the early part of the decade but received greater attention in the latter part. Examples of such issues are accounting for price changes, and for segments of a business. A bias is therefore created in the sense that the study does not deal with a random sample of practices on which the authors were able to collect data in these thirty-seven countries in the three different years. Instead, these practices were the survivors in the sense that they were considered important in all three years. Because of this, practices on which harmonization took place toward the end of the period may have been excluded; alternatively, a disproportionately large number of those practices on which harmonization had already taken place may have been included. However, the fact that these practices were included in all three surveys indicates that they are not trivial issues.

The format of the responses also changed over time. The categories into which a country's position on a practice was classified were different in each of the three surveys. These categories are listed here.

In 1973	*In 1975*	*In 1979*
1. Required	1. Required	1. Required
2. Majority	2. Majority	2. Majority
3. About half	3. About half	3. Predominant practice
4. Minority	4. Minority	4. Minority practice
5. No application	5. Not found in practice	5. Rarely or not found
6. Not permitted	6. Not permitted	6. Not accepted
	7. No application	7. Not permitted
		8. No application

Before the analyses could proceed, these categories had to be made consistent over time. This was accomplished by collapsing certain categories in each survey to yield the following five broader categories:

1. Required (including Insisted upon from 1979);
2. Predominant practice (including Majority and About half from both 1973 and 1975);
3. Minority practice;
4. No application (including Not found in practice from 1975 and Rarely or not found from 1979); and
5. Not permitted (including Not accepted from 1979).

The analyses, presented in the next section, deal with these five new categories.

ANALYSIS AND RESULTS

To harmonize accounting standards is to bring them into agreement. Thus, with respect to the data base of this study, the authors accepted that harmonization on a given practice has taken place if all countries are in the same category with respect to that practice. Complete harmonization would require that all countries were in one or the other *extreme* category, Required or Not permitted. Even if all countries fell into one of the two intermediate categories, Predominant or Minority practice, this would indicate that true uniformity has not yet been achieved since some diversity of practice does exist within the individual countries. Clustering of all countries in the remaining category, No application, would indicate that the practice is not important with respect to these thirty-seven countries. Thus, for the purposes of this study, the authors concentrated on the extent to which the thirty-seven countries were to be found in either the Required or Not permitted categories.

An analysis was therefore conducted on each of the 131 accounting practices to determine how the thirty-seven countries were classified in each of the three years that the survey was conducted. For example, for the practice Depreciation methods are disclosed, the following distribution appeared:

Category/ Years	*Required*	*Predominant practice*	*Minority practice*	*No application*	*Not permitted*	*Total*
1973	9	7	15	6	0	37
1975	16	8	9	3	1	37
1979	28	2	5	2	0	37

This indicates that whereas only nine of the thirty-seven countries required disclosure of depreciation methods in 1973, twenty-eight of the same thirty-seven required such disclosure in 1979.

There was no accounting practice among the 131 for which all thirty-seven countries were in either the Required or Not permitted categories, that is, there was no practice on which complete harmonization had been achieved. Accordingly, a less stringent operational definition of harmonization was adopted. The authors looked for those practices on which more than half of the thirty-seven countries (nineteen or more countries) were to be found in either the Required or Not permitted categories by 1979. We identified 49 such practices, or approximately 37 percent, from the original 131. For 39 of these practices, the majority of countries were in the Required category while for the other 10, the majority were in the Not permitted category.

Even though more than half the countries were in agreement on these forty-nine practices, this harmony cannot be ascribed to the activities of the IASC without further analysis. For example, the countries may have been in agreement long before IASC came into existence. Therefore, the next step of the analysis was an attempt to determine the number of accounting practices of these forty-nine for which significant changes in distribution had taken place during the period 1973 to 1979.

To determine whether the shifts during the period were statistically significant, Friedman's Analysis of Variance[10] was utilized. The Friedman test can be used to examine the rankings on a criterion for the same group of cases (that is, countries) under two or more different conditions (such as might exist at different points in time). This technique was appropriate for the purposes here since the three surveys were not independent but instead constituted repeated measures on the same sample of thirty-seven countries. For this statistical test to be used, the data had to be recast in a different form. For example, assume the extent of usage on a given practice in two countries for the three years were as follows:

Country/ Year	*1973*	*1975*	*1979*
Country A	Minority practice (coded as 3)	No application (coded as 4)	Not permitted (coded as 5)
Country B	Predominant practice (coded as 2)	Predominant practice (coded as 2)	Required practice (coded as 1)

Then this data for each country (row) could be transformed into ranks as follows:

Country/ Year	*1973*	*1975*	*1979*
Country A	1	2	3
Country B	2.5	2.5	1

These rankings can then be analyzed by Friedman's Analysis of Variance to determine whether the overall change in ranks during the time period is statistically significant. The null hypothesis in such a test is that there is no difference in ranks over time. The test statistic follows a Chi-square distribution, and for the purposes of this study, a significance level of 5 percent was selected.

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[10] Sidney Siegel, *Nonparametric Statistics for the Behavioral Sciences* (New York: McGraw-Hill Book Company, 1956).

The results indicate that of these forty-nine practices (those for which the presence of harmony of practice between countries had been detected), twenty-nine had significant changes in ranks between the three surveys.[11] Investigating further, it was found that for twenty-five of these twenty-nine practices, the significant shift occurred between the 1975 and 1979 surveys. (IASC Statement No. 1 was issued in January 1975, and thus it is not surprising that most of the significant changes should be observed after that date.) The twenty-nine practices are listed in exhibit 3. All of these practices except numbers 7, 21, 25, and 29 had significant shifts between 1975 and 1979. For nine of the practices, the majority of countries were in the Not permitted category rather than the Required category. These nine were numbers 13, 15, 16, 17, 21, 22, 23, 26, and 27.

In comparing the general topic areas covered by these twenty-nine practices with those covered by the IASC in their first ten pronounce-

Exhibit 3. Accounting Concepts and Practices Which Had Significant Movement to Harmonization — Sample of Thirty-seven Countries, 1973-1979

Accounting concept or practice (Description below title)	*Applicable IASC standard*	*Direction of movement*
1. Going Concern Concept Financial statements are drawn up on the premise that the business will continue in operation indefinitely.	Standard No. 1	Required
2. Consistency Concept Accounting principles and methods are applied on the same basis from period to period.	Standard No. 1	Required
3. Accrual Concept Revenues and costs are recorded in the financial statements of the period in which they are earned or incurred, and not as money is received or paid.	Standard No. 1	Required
4. Realization Concept Revenue is recognized when its realization is reasonably assured.	—	Required
5. Matching Concept Cost of sales and expenses are appropriately matched against sales and revenue.	—	Required

[11] Of these 131 practices, 39 had significant shifts in the period 1973 to 1979, but for 10 of these, the number of countries involved was less than nineteen; that is, the shift involved changes between the intermediate categories of Predominant practice, Minority practice, or No application.

Exhibit 3 (cont.)

Accounting concept or practice (Description below title)	*Applicable IASC standard*	*Direction of movement*
6. Historical Cost Convention Departures from the historical cost convention are disclosed.	—	Required
7. Accounting Policies When accounting principles or methods have not been applied on the same basis from period to period in the determination of results of operations or financial position, the effect of the change is disclosed.	Standard No. 1	Required
8. Fixed Assets When fixed assets are stated, in historical cost statements, at an amount in excess of cost, the basis of revaluation is disclosed.	—	Required
9. Fixed Assets When fixed assets are stated, in historical cost statements, at an amount in excess of cost, depreciation based on the revaluation is charged to income.	—	Required
10. Depreciation Depreciation methods are disclosed.	Standard No. 4	Required
11. Inventories The basis on which inventories are stated is disclosed.	Standard No. 2	Required
12. Inventories A breakdown of inventory by types, such as finished goods, work-in-progress, and materials is disclosed.	Standard No. 2	Required
13. Inventories Market value ("market") of inventories is interpreted to mean net realizable value defined as estimated selling price less reasonably predictable costs of completion and disposal and normal profit margin.	Standard No. 2*	Not Permitted
14. Inventories Inventories are stated at cost or market, whichever is lower.	Standard No. 2*	Not Permitted
15. Inventories Inventories are stated at cost although this may exceed market.	Standard No. 2*	Not Permitted
16. Inventories In historical cost statements, inventories are stated at market although this may exceed cost.	Standard No. 2*	Not Permitted

Exhibit 3 (cont.)

Accounting concept or practice (Description below title)	*Applicable IASC standard*	*Direction of movement*
17. Inventories Own manufactured goods are stated at estimated net realizable value when sale is assured.	Standard No. 2*	Not Permitted
18. Inventories The method of determining the cost of inventories (LIFO, FIFO, average, etc.) is disclosed.	Standard No. 2	Required
19. Investments When the carrying amount of an investment is permanently impaired, a provision is made for impairment.	Standard No. 3	Required
20. Receivables Receivables from affiliated companies are disclosed.	Standard No. 5	Required
21. Shareholders' Equity When there is no cash option, dividends satisfied by the issue of par value shares are recorded by the issues at the greater of market and par value of the share.	—	Not Permitted
22. Shareholders' Equity General reserves are set up by charges to income.	—	Not Permitted
23. Shareholders' Equity Reserves are used by absorb charges which would otherwise be charges against income of current or future years.	—	Not Permitted
24. Subsequent Events Events or transactions occurring between the date of the balance sheet and the date of the auditors' report which may have a material effect on the financial position or results of operations being reported upon are disclosed or reflected in those financial statements.	Standard No. 10	Required
25. Income Taxes Provision for income taxes on the current period's profits is shown separately before determining net income.	Standard No. 5	Required
26. Income Taxes Accounting practices adhere strictly to tax requirements.	Standard No. 12*	Not Permitted

Exhibit 3 (cont.)

Accounting concept or practice (Description below title)	*Applicable IASC standard*	*Direction of movement*
27. Consolidations Parent-company financial statements only are prepared for shareholders of a parent company.	Standard No. 3*	Not Permitted
28. Business Combinations In a business combination accounted for as a purchase, retained earnings of the acquired company prior to the combination are excluded from the retained earnings of the combined organization.	—	Required
29. Foreign Currency The basis for translating foreign currencies is disclosed.	Standard No. 1	Required

* With respect to practices 13, 14, 15, 16, 17, 26, and 27, the IASC standard listed prohibits the practice in question.

ments, it is of interest to note that all pronouncements except those dealing with changing prices, the statement of changes in financial position, and research and development of activities are reflected in the list. Exhibit 3 also relates these international accounting practices to the applicable IASC standard. It was found that twenty out of the twenty-nine practices could be related to seven IASC standards. In every case, the direction of change was consistent with the position espoused by IASC. With respect to reporting on changing prices and accounting for research and development, it should be recalled that the position of IASC was in conflict with the U.S. position. This suggests a possible association between the U.S. position on an issue and subsequent harmonization. This link will be explored later in the paper. Thus, there is some evidence from Price Waterhouse, a source independent of IASC, that these standards have been reflected in an associated harmonization of international accounting practices in those topic areas.

NATIONAL INVOLVEMENT IN HARMONIZATION

In the final step of this analysis, the authors investigated which countries were involved in the observed recent movement toward harmonization. For each of the twenty-five accounting practices for which a significant movement toward harmonization occurred between 1975

and 1979, those countries which had been involved were identified and were then grouped using the characterization developed by Frank based on the similarity of accounting practices in use in 1973.[12] He characterized the thirty-seven countries in this study (plus Ethiopia) as belonging to one of the following models: the British Commonwealth (twelve countries), Latin America (nine countries), Central Europe (eight countries), and the United States (eight countries).

For example, with respect to the Going concern concept (number 1 as listed in exhibit 3), it was found that twenty countries moved in the direction of increased harmonization (requiring the practices), fourteen made no change, and three moved in the opposite direction (toward prohibiting it).[13] Of the twenty countries that moved toward harmonization, nine were from the British Commonwealth group, six were from the Latin American group, four were from the Central European group, and only one was from the U.S. group. This same pattern (countries identified with the U.S. group being much less active than those in the other groups) was typical of all twenty-five practices. The authors found that a majority of the British Commonwealth countries changed in the direction of increased harmonization for seventeen of twenty-five practices. Similarly, a majority of the Latin American and of Central European countries moved toward increased harmonization for twenty and fifteen of the twenty-five practices, respectively. On the other hand, a majority of the U.S. group participated in such a change for only three of the twenty-five practices. This suggests two possible explanations: the U.S. group countries were not interested in change, or the other countries were moving toward the position the U.S. group countries had already taken.

To distinguish between these alternative explanations, the position of the United States in 1975 on the twenty-five practices was examined. This analysis showed that of the seventeen practices the rest of the world required in 1979, the United States had already mandated fourteen of them, two had no application, and one was followed by a majority of firms in 1975. Similarly, of the eight practices that the rest of the world had moved toward prohibition in 1979, the United

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[12] Frank, "International Accounting Practices."

[13] Consistent with the definition of harmonization used in the first part of this study, *movement toward harmonization* is defined as movement in the direction taken by a majority of countries toward requiring (or prohibiting) a given accounting practice. For example, if a country moved from category 3, Minority practice, in 1975 to category 2, Predominant practice, in 1979, this was interpreted as a move in the direction of harmonization if a majority of countries required the use of this practice in 1979.

States had already prohibited seven, and one was followed by only a minority of firms in 1975.

This would tend to indicate that the United States enjoys a position of leadership in international accounting and that other countries tend to adopt the positions espoused by it. It confirms the observation made earlier on the pronouncements of the IASC and their relationships to U.S. pronouncements on the same topic. The inference of leadership by the United States is strengthened by the fact that harmonization was not detected on those issues on which the IASC's stand contradicted the U.S. position.

It is interesting to speculate on possible explanations underlying the apparent leadership role of the United States. Some insights into the nature of the standard-setting process are provided by examining the possible role of powerful groups in influencing decisions on accounting standards. This issue has drawn considerable attention in the United States where the actions of the APB and the FASB have been closely scrutinized. Horngren remarked that "... the setting of accounting standards is as much a product of political action as well as of flawless logic or empirical findings."[14] Solomons notes that "today, to judge from current discussions of the standard-setting process, accounting can no longer be thought of as nonpolitical."[15] The Staff Study of the Subcommittee on Reports, Accounting, and Management of the United States Senate is replete with charges of corporate dominance of the standard-setting process.[16] Empirical investigations of the influence exerted on policy makers and of the rationale for such behavior on the part of lobbyists can be found in Rockness and Nikolai[17] and Watts and Zimmerman.[18]

In the international arena, there is no reason to suspect that the setting of accounting standards is any more a product of "flawless logic or empirical findings" than it is domestically in the United States. The pressure may be exerted more on the behalf of national accounting

[14] Charles T. Horngren, "The Marketing of Accounting Standards," *Journal of Accountancy* (October 1973): 61-66.
[15] David Solomons, "The Politicization of Accounting," *Journal of Accountancy* (December 1978): 65-72.
[16] U.S. Congress, Senate, Subcommittee on Reports, Accounting and Management of the Committee on Government Operations, *The Accounting Establishment: A Staff Study* (Metcalf Staff Report) (Washington, D.C.: Government Printing Office, 1976).
[17] Howard O. Rockness and Loren A. Nikolai, "An Assessment of APB Voting Patterns," *Journal of Accounting Research* (Spring 1977): 154-67.
[18] Ross L. Watts and Jerold L. Zimmerman, "Towards a Positive Theory of the Determination of Accounting Standards," *Accounting Review* (January 1978): 112-34.

groups than from specific corporate or industry interests. These national accounting groups would be concerned with ensuring that the international accounting standard on a given issue varied as little as possible from the domestic standard on that issue. A national accounting group would lobby in this fashion in order to minimize the costs associated with changing to a new standard, or to avoid the stigma of noncompliance if it chooses instead to ignore the new international standard. One would expect the lobbying effort to be the greatest on the part of the accounting professions in those countries such as the United States which have devoted a great deal of effort and resources to developing an extensive and well-codified set of standards. These countries would have the most to lose if an international accounting standard was at variance with the domestically accepted accounting principle.

If the United States plays a leading role in IASC deliberations, then this suggests that rapid movement is not likely to occur in those standards which are the subject of heated controversy in the United States. Thus, in spite of the progress in accounting for the effect of changing prices in Europe, this topic has only just reached exposure draft form (Exposure Draft No. 17) with the IASC. This slow pace is also seen in the area of translating foreign currency. In the United States, the controversy surrounding FASB *Statement of Financial Accounting Standards No. 8,* "Accounting for the Translation of Foreign Currency Transactions and Foreign Financial Statements," caused that organization to issue a new exposure draft proposing changes from the existing requirements. Given the disagreement in the United States, it should not be surprising to find that no standard yet exists for this subject even though an exposure draft (No. 11) was issued in December 1977. Currently, efforts are being made to achieve a consensus on this subject by the professional accounting associations in the United States, Canada, and the United Kingdom.

Another implication of viewing the setting of standards as a political process is that governments, as well as the professional accounting organizations, would be expected to become involved. The European Economic Community (EEC), the United Nations, and the Organization for Economic Cooperation and Development are now taking an active role in developing international accounting standards. Directives issued by the EEC Council of Ministers are to be enacted into law by member countries, thus providing legal sanctions for the directives.

SUMMARY AND CONCLUSIONS

The authors examined 131 accounting practices common to the 1973, 1975, and 1979 surveys of international accounting practices made by Price Waterhouse. Although in 1973 a majority of the thirty-seven countries in the sample were in agreement on mandating adherence to only eight of 131 practices, by 1979 agreement had increased to forty-nine practices. In further analysis of these forty-nine practices, it was found that a significant change in position had taken place for twenty-nine practices during the period 1973-1979, and for twenty-five practices during the period 1975-1979. Further, the topics on which IASC had issued pronouncements during the period 1973 to 1979 were related to the accounting practices on which the authors had detected harmonization. Harmonization was not detected on those issues on which the stand of IASC was in conflict with the stand of the United States. With respect to where harmonization had occurred, it was found that the United States and countries with similar accounting practices were not very active in making such changes. Most of the movement was due to changes made by countries from the British Commonwealth, Central Europe, and Latin America. Pursuing the possible reason for such behavior, the authors noted that the practices which the rest of the world had moved toward requiring (or prohibiting) by 1979 had been already required (or prohibited) in the United States in 1975.

In conclusion, it should be observed that the inference of causation is no easy task and that there are more dangers than rewards in such an endeavor. Nonetheless, the authors can state that the period of the IASC's existence has coincided with a growing harmonization of accounting standards. This association between the two is strengthened by the fact that many of the topics on which the IASC has issued pronouncements are those on which the authors observe harmonization. Another conclusion to be drawn from this study is that the accounting practices in the United States seem to serve as a model for this harmonization process.

The Theory of Islamic Banking: Accounting Implications

MOUSTAFA F. ABDEL-MAGID*

Many economists agree that the current state of the global economic system is alarming and that the future promises no easy solutions. The persistence of the problems of the global economic system presents serious challenges and new opportunities for researchers in economics and business administration. Forging a new international economic order brings pressures and demands on academics to explore untapped sources of human thought. The fundamental changes in the world economic order since 1973 have made the economies of most nations highly interdependent. Consequently, new theories or modifications of existing theories to cope with the new circumstances should start at the cultural level. Cultural conditions play a significant role in shaping economic behavior in any society.

The primary purpose of this paper is to provide a descriptive account of Islamic banking and explore its accounting implications. A brief introduction of the precepts and general principles of Islamic economics is included to place Islamic banking in proper perspective.[1]

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The author expresses his gratitude to his colleague, Dr. Shuaib A. Shuaib, chairman of the Department of Accounting, Kuwait University, for his assistance and helpful comments.

[1] A comprehensive statement of the theory of Islamic economics takes many volumes and is certainly beyond the scope of a single or several papers. The concepts given in this paper are a mere introduction to a complex and difficult subject. For an excellent discussion of Islamic economics, see Syed Abul Ala Maudoodi, *Capitalism, Socialism and Islam,* trans. Sharif Ahmed Khan (Lahore, Pakistan: Islamic Book Publishers, 1977).

ECONOMIC IDEOLOGY IN ISLAM

The Islamic solution to the economic problem consists of a few precepts and fundamental principles explicit in the verses of the Qur'an and the words and acts of the Prophet Muhammed (Al-Sunna). Codes and sanctions for daily applications have been developed by Islamic scholars on the basis of deductive inferences and interpretations of the verses of the Qur'an and Al-Sunna. The precepts and fundamental principles and their interpretations are the ingredients of Islamic ideology.

Precepts of Islamic Economics

1. Islam is a religion that provides an integrated way of life with prescribed codes for the social, economic, cultural, civil, and political fabric of society. The economic problem is viewed within the total framework of Islamic ideology.[2]

2. The Islamic point of view attaches real importance to the individual and not to any group, nation, or society. The individual does not serve society, but society serves the individual. On this personal responsibility and accountability depends the entire value system of mankind. The criterion of goodness of a social order is the degree to which it can help its individuals to prosper and develop their potentialities.

3. The morality developed in man by Islam rests on the bed-rock of the fear of God's displeasure and the sense of responsibility to him. No individual or group of individuals with these two qualities can ever agree to establish and run a system which makes him or her responsible for the collective welfare of millions of individuals. The Holy Prophet set this norm. During a famine in Medina, he was informed that prices were soaring and was asked for official control. He declined, saying, "I want to meet my Lord God in such a state that there is no complaint of injustice against me from a single soul." He then devoted his efforts to the moral reform of businessmen, and by continuous preaching he achieved the desired effect of lower prices.

4. The natural state for human economic activity lies in the fact that individuals may take the resources of the earth and utilize and profit by them singly or in groups, and there may be free exchange of commodities and services.

5. Islam disapproves of revolutionary economic methods. During the pre-Islamic days, the Arabs used various means to earn a livelihood that

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[2] Ahmed M. Al-Assa'al and Fathy A. Abdel-Karim, *The Economic System in Islam: Principles and Objectives* (Cairo: Maktabat Wahba, 1977), p. 20.

were later declared unlawful by Islam. But question was never raised as to whether the previous hoardings ought to be confiscated. All unlawful methods were banned for the future, and all previous properties and hoardings were gradually absorbed by the Islamic law of inheritance.[3]

6. *Zakah* is a 2.5 percent annual compulsory tax binding on all Muslims classified as not poor.
7. *Riba,* fixed interest in any form, is prohibited by the Qur'an.

In addition to the economic precepts, the tenets of Islamic economics include fundamental principles derived from the Qur'an and Al-Sunna. Flexibility in Islamic economics reflects interpretations of the Qur'an and Al-Sunna by Islamic scholars. This flexibility makes the principles open to interpretation or operational definitions and explains the many disputes and controversies among Islamic scholars. However, disputes and controversies have been characteristic of every economic theory and are not unique to applications of Islamic economics.

THE NEED FOR ISLAMIC BANKING

The renewed commitment to Islam and the revival of Islamic thought have resulted in three major developments in many Islamic countries.

1. A growing trend toward transcending national boundaries and unifying Muslims into a political-economic entity that could have a significant impact on the patterns of world trade. The Islamic Conference is the formal institution whose major objective is the achievement of this unification on a gradual basis. An Islamic common market is a viable possibility in the near future.
2. A growing tendency to resort to Islamic Shari'ah Law as the basic source for legislation.
3. A tendency to establish an Islamic economic system in every Islamic nation. An Islamic economy requires the complete elimination of interest from the banking system. Consequently, an Islamic economic system is impossible without an Islamic banking system.

Islamic Banks

Commercial and financial activities in Islamic nations are conducted in accordance with a set of legal rules embodied in commercial companies' laws which generally conform with Western commercial and financial practices of providing ample room for usurious transactions between parties involved in business activities, particularly between banks and their customers. The Islamic Shari'ah Law prohibits the practice of usury as well as all usurious transactions.

[3] Maudoodi, *Capitalism, Socialism, and Islam,* p. 59.

In compliance with this law, several Islamic governments have promulgated special laws and decrees establishing Islamic banks as shareholding companies which could engage in financial, insurance, and various other forms of investment activities without practicing usury or charging interest. The first Islamic bank, Nasser's Social Bank, was established in Egypt in 1971. This was followed by the Islamic Development Bank in Saudi Arabia in 1974, Dubai Islamic Bank in 1975, Faisal Islamic Bank of the Sudan in 1977, Faisal Islamic Bank of Egypt in 1977, Kuwait Finance House in 1977, the Islamic Investment Company — Bahamas in 1977, the Islamic Investment Company of the Gulf — Sharjah in 1978, the Jordanian Islamic Bank in 1978, Bahrain Islamic Bank in 1979, and the Islamic Investment Company of Pakistan in 1979. More Islamic banks are in the organizational stage in Morocco, Moritania, Malaysia, Senegal, and Qatar. Negotiations are currently taking place for establishing correspondent banks in Luxemburg and West Germany.[4] Given the growing influence of Islamic economic thought in Islamic nations and the sizable oil revenues of the oil-rich Islamic countries, there is reason to believe that more Islamic banks will be established. In February 1979, the government of Pakistan announced a policy that should lead to a complete Islamization of Pakistan's economy and the complete elimination of interest from Pakistan's banking practices. A similar policy was announced by the Islamic government of Iran shortly after the revolution in that country. The International Federation of Islamic Banks was formed in 1977 to promote cooperation among Islamic banks and to develop solutions to common problems through a continuing research program and by organizing annual conferences for members. The establishment of a central Islamic bank and an Islamic stock exchange is under study.

The activities of Islamic banks include Western-style banking services, economic development, and investment. Despite the fact that many detailed rules for the banking operations and accounting practices are still to be derived from the Islamic Shari'ah, Islamic banks operate according to two fundamental principles: (1) the complete elimination of interest in any form from the banking system, and (2) the use of several forms of profit-and-loss sharing plans as the backbone of Islamic banking practices.

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[4] Ahmed A. Elnagarr, M.S. Ibrahim, and M. N. Elansary, *On Islamic Banking* (Dakar, Senegal: The International Federation of Islamic Banks, 1978), pp. 11-12, 106.

Objectives of Islamic Banks

1. To conduct all banking operations and operations for its own account, or for that of third parties, without practicing usury, whether as interest or in any other form.
2. To invest in or purchase or finance projects or activities owned by others, on nonusurious basis.
3. To enable Muslims all over the world to invest their funds in accordance with the principles of Islamic Shari'ah by providing various forms of profit-sharing plans (including partnership, mudaraba, and murabaha) as an alternative to fixed-interest plans which are prohibited by Islam.
4. To collect contributions to the Zakah fund and to dispense the fund according to the Islamic Shari'ah.
5. To provide interest-free loans to Muslims whose need to borrow arises from exceptionally difficult personal circumstances.
6. To contribute to the process of development in the Islamic community with a proper balance between the social and economic aspects of development. This balance is achieved by ensuring that funds of the bank are invested only in projects that prove consistent in every aspect with the principles of Islamic Shari'ah.

PRINCIPLES OF ISLAMIC BANKING

An Islamic bank is a shareholding company owned by its shareholders established to conduct banking and investment activities in accordance with the Islamic Shari'ah and its articles of association. The bank is a separate legal entity independent of the parties that provide funds for its operations whether they be shareholders, depositors, or any party to its investment activities. The sources of funds of an Islamic bank are current accounts, demand deposits, Zakah funds, investment deposits, and share capital.

Current Accounts

Islamic banks provide current accounts to their customers with the following provisions:

1. The relationship between the bank and the customer is debtor-creditor relationship.
2. The customer does not receive interest on a current account regardless of the amount kept in the account nor can the bank charge interest or service charge on these accounts. There is general agreement among Islamic banks that current accounts should be offered as a free-of-charge banking service.

3. Overdrafts are allowed in Islamic banks provided customers make advance arrangements with the bank as to the limit of overdraft, but no interest or service charge is levied on overdrafts.
4. The bank may design a flexible investment policy to earn revenues sufficient to cover the operating costs related to current accounts. Such policy must consider the liquidity necessary to meet customers' withdrawals at any time. The last conference on Islamic banking recommended that banks may obtain advance approval of such policy. Another recommendation by the conference would permit Islamic banks to charge the customer for any expenses (telephone, mail, monthly statements) incurred by the bank directly related to the customer's account.
5. Current accounts cannot receive any portion of the bank's profits.

Demand Deposits and Saving Accounts

The rules that apply to current accounts also apply to demand deposits and saving accounts (unless the customer authorizes the bank to invest them, in which case they are treated as investment deposits). The view that fixed interest on these deposits is forbidden by the Islamic Shari'ah affects Islamic banks. Any increment in deposit must be the result of putting capital to work in potentially productive ventures. Since demand deposits cannot be committed to investment and do not share in the risks, they cannot receive any return and therefore do not receive any share in profits. Profits and losses from investing demand deposits or saving accounts belong to the bank which is legally obliged to pay these deposits immediately if the customer wishes to withdraw them.

Zakah: The Islamic System of Taxation

Consistent with its status as an Islamic institution, an Islamic bank is expected to establish and manage a Zakah fund. The bank shall collect Zakah from shareholders, depositors, employees, and other parties. The Zakah fund will have separate accounts and independent management and is a major responsibility of the Religious Supervisory Board of the Islamic bank.

Zakah is the social insurance plan managed by the Islamic state. Islamic Shari'ah suggests the following ways to finance the Zakah fund:

1. Everyone who keeps more than a certain amount of capital should pay 2.5 percent of that capital annually.[5] The implementation of this

[5] Maudoodi, *Capitalism, Socialism, and Islam,* p. 65.

rule requires a clear definition of the term *capital* in Islam and a clear statement of the provisions that make capital subject to Zakah. Islamic economists state that capital subject to Zakah is any accumulated wealth exceeding that necessary for personal use and consumption, such as household furniture and tools of the trade. In other words, wealth that exceeds the amount necessary to satisfy the basic human needs is subject to a 2.5 percent annual Zakah charge regardless of whether the excess wealth is invested in commerce. In this respect, wealth usually takes the form of moneys (gold, silver, or paper currency).[6]

2. Every zeminder (peasant) and cultivator should pay 10 percent of the produce of the unirrigated land and 5 percent of that irrigated under his or her control.
3. Every industrialist and businessperson should pay 2.5 percent of the total annual assets.
4. One-fifth of the wealth obtained from mines and buried treasures goes to the state.
5. Every breeder maintaining a herd above a given number should pay annually to the state a certain percentage of his or her animal wealth according to an ascending scale.

Recipients of the Zakah funds include the poor and the needy, debtors in financial difficulty and unable to pay their debts, workers who collect Zakah, Muslims who wish to visit Mekka but are financially unable to do so, volunteers who dedicate their time and effort to spread the cause of Islam, and slaves who can be freed in exchange for a lump sum of money.

Islamic scholars agree that the collection and spending of Zakah have favorable economic and social consequences. Collecting Zakah on excess wealth provides the rich with an incentive to invest wealth in some productive activity to earn sufficient income to pay the annual Zakah without impairing that wealth. The aggregate economic effect of Zakah will be to increase investment and employment. In the meantime, collecting Zakah from people with relatively low marginal utilities for money and giving it to the poor and needy who normally have a high marginal utility for money increases aggregate demand for consumer goods and makes aggregate utility greater. Zakah's social objectives are to narrow the economic gap between rich and poor Muslims, and to contribute to the general stability and security of Islamic societies by reducing the rate of delinquency.[7]

[6] El-Ass'al and Abdel-Karim, *Economic System in Islam,* pp. 105-12.
[7] Ibid., pp. 105-23.

Investment Deposits

Deposits for investment are of three types: (1) savings accounts, (2) limited-term deposits, and (3) deposits for an unlimited term. The latter category can either be limited to a particular project or activity, for example, real estate (industrial, financial) or made absolute and unconditional. So far, Islamic banks have accepted only deposits for unconditional investment, and these are accepted for a one-year investment term which is automatically renewed for unlimited-term deposits. Deposits for investment cannot be withdrawn before the date specified in the deposit agreement. Only in exceptional circumstances can such deposits be withdrawn before the specified date if the depositor relinquishes his or her share in profits and the board of directors approves the withdrawal.

Deposits for investment in an Islamic bank are covered by the Islamic investment model known as mudaraba which is a contractual relationship with the depositor/investor supplying capital to an agent/manager (the Islamic bank in this case) in return for a share in the profits resulting from investing the capital during a given period of time.

Deposits for investment represent a separate accounting and legal entity within the Islamic bank. The bank is required to maintain a separate set of books and to prepare separate financial statements for this entity as a distinct investment center. Depositors are entitled to have their own independent public accountant audit the accounts of their investments. The public accountant who represents the depositors must be different from the public accountant who audits the general accounts of the Islamic bank. As the representative of the depositors, the auditor is required to provide them with an annual report after auditing the accounts and the financial statements of the investments.

Deposits for investment present several accounting problems in the area of income determination and income distribution. In theory, the agreement between the depositor and the bank should specify in advance the ratio for sharing the profits and losses of the investments between the bank and the depositors as a group. Current practices of Islamic banks give the bank the right to a share in profits while losses are absorbed entirely by the depositors. Islamic scholars justify this position by arguing that the Islamic bank contributes efforts and special know-how to the investment process. When the result of the investments is a loss, the bank does not receive any compensation for

these efforts. Consequently, losses must be absorbed by depositors only. The responsibility of each depositor for the losses incurred is limited to the amount deposited and committed for investment.

In practice, investment agreements between depositors and Islamic banks do not even specify in advance a profit-sharing ratio, despite an explicit recommendation for this by the International Federation of Islamic Banks.[8] Distributions to deposits committed for investment are made ex post by prorating total actual profits between shareholders' capital and total deposits for investment.[9]

One major problem in the theory of Islamic banking is the measurement of net profits on deposits for investment. Specifically, what costs are deductible from gross investment revenues for the purpose of measuring net profits on deposits for investment? An Islamic economist examined this problem and concluded that only expenses directly traceable to the investment activity (for example, supplies, telephone calls, and postage) are proper charges to income on investment deposits.[10] According to this view, expenses incurred by the bank as an agent/manager are not proper charges to income on investment deposits since the bank shares in investment profits and is, therefore, a partner in the mudaraba operation.

A separate statement prepared by an Islamic bank to show the results of investment activities of investment deposits can take the form shown in exhibit 1.

After the amount of profits distributable to depositors is determined, the share of each depositor is determined on the basis of (1) the rate of distributable profits to total deposits for investment, (2) the amount of the deposit for investment, and (3) the period of the deposit to the nearest month.[11]

Share Capital

The owners of an Islamic bank are its shareholders. They are the

[8] Ahmed F. Abdel-Kalik, "The Measurement and Distribution of Profits in Islamic Banks," Working Paper of the Department of Accountancy, Kuwait University, 1980, p. 4.

[9] The articles of association of Kuwait Financial House state that "if the rate of profit distribution exceeds 20 percent, an extra rate of profit not exceeding 10 percent may be distributed to shareholders' capital and any surplus shall be added to reserves" (article no. 46). The same provision is included in the articles of association of Dubai Islamic Bank (article no. 56).

[10] Sami Hamoud, *Restructuring of Banking Operations to Conform to Islamic Shari'ah* (Cairo: Cairo University Press, 1975), p. 490.

[11] Abdel-Kalik, "The Measurement and Distribution of Profits in Islamic Banks," p. 24.

Exhibit 1. Arab Islamic Bank Statement of the Results of Investment Activities of Deposits Committed for Investment for the Year Ended December 31, 198X

Revenues		
Investment dividends	XXX	
Gain on sale of investments	XXX	
Profits on murabaha operations	XXX	
Revenues from financing operations	XXX	
Miscellaneous revenues	XXX	
Total revenues		XXX
Expenses		
Supplies, telephone, and postage	XXX	
Losses on sale of investments	XXX	
Allowance for uncollectibles	XXX	
Allowance for decline in market value of investments	XXX	
Total expenses		XXX
Net profit on investment of deposits		XXX
Less Islamic Bank share in profits		XXX
Profits distributable to depositors		XXX

residual-equity holders in the sense that they share the residual profits, the risks, and any residual assets upon liquidation. All the shares issued by Islamic banks are common shares; the banks cannot issue preferred shares or bonds. The rights and responsibilities of shareholders covered in companies' acts and the articles of association are identical to those granted the shareholders of any non-Islamic corporation. There are no restrictions as to how management can invest share capital except for those activities that violate the Islamic Shari'ah.

Although the guidelines of the International Federation of Islamic Banks state a Muslim of any nationality can own shares in the Islamic banks, the Kuwait Financial House restricts ownership of its shares to the Muslim citizens of Kuwait. This restriction is also written into the Articles of Association of the Dubai Islamic Bank.

ACTIVITIES OF ISLAMIC BANKS

The scope and nature of the operations and activities of Islamic banks represent a fundamental departure from the established traditions of Western banks. The typical activities of an Islamic bank include the following: normal banking services, direct investment, extension of credit through interest-free nonprofit loans and loans with profit-shar-

ing provisions, participation and profit-sharing agreements, mudaraba, and economic development.

Normal Banking Services

Islamic banks render traditional banking services in return for commissions and genuine service charges. The services rendered include (1) opening current and saving accounts, (2) purchasing and selling gold bullion and foreign currency and drafts in such exchange, (3) issuing guarantees and letters of credit in favor of third parties, (4) providing short-term financing against collateral in the form of commercial papers at an agreed-upon yield not involving usury, (5) purchasing and selling shares, certificates of deposit, and similar financial papers, (6) receiving subscription payments related to the sale of stock of shareholding companies, (7) collecting the value of drafts and other commercial papers, (8) safekeeping of all kinds of currencies and valuables, and (9) renting safe deposit boxes.

Normal banking services are provided within the following guidelines: (1) interest charges and credits constitute Riba and are therefore prohibited, (2) discounting notes for less than maturity value involves Riba and is prohibited, (3) loans to customers must be interest-free good-faith loans, (4) the bank is entitled to recover the actual direct costs of providing a given service as legitimate service charges, (5) the bank is entitled to a commission for performing a service or acting as an agent, (6) service charges and commissions calculated as percentage of the value of a transaction are prohibited, and (7) service charges and commissions should be determined as a flat amount on a case-by-case basis.

Direct Investment

Islamic banks are permitted to establish or acquire financial, agricultural, industrial, or construction enterprises and to manage them as subsidiaries. This kind of investment is a departure from the traditions of Western banks because of the risks involved. The theory of Islamic banking considers direct investment in wholly owned subsidiaries an effective substitute for the usurious lending practices of non-Islamic banks. Direct investment is seen as an important source of profits which an Islamic bank needs to cover its own general expenses and pay its shareholders a fair return on their invested capital. Other reasons for allowing direct investment include the promotion of economic activities that conform to the Islamic Shari'ah by insuring that all phases of the production process are permitted by Islam. The guide-

lines established by the International Federation of Islamic Banks emphasize that direct investment must also be based on rational investment criteria such that the risks taken are justified by expected returns. Diversification is invariably recommended as a means to reduce risks. Direct investment reflects the view that an Islamic bank is a financial institution with economic and social objectives to be achieved within a general Islamic framework.

Extension of Credit

An Islamic bank may provide shareholders and depositors with good-faith loans if the purpose of the loan is production and not consumption. Such loans are interest free and without share in profits and are usually made to finance the operations of small businesses. The bank normally requires securities such as mortgage of property or other collateral or personal guarantees from a third party. Good-faith loans are usually small in amounts and are given for short periods, and are granted after a careful examination of the applicant's financial position and credit record. The bank is allowed to charge the customer for actual costs directly related to the management of the loan. If the debtor defaults, the bank may extend the credit period, impose a fine on the debtor, confiscate the collateral, claim the loan from the guarantor, or simply take legal action. Good-faith loans are also granted for consumption purposes to individuals in financial difficulty because of illness, unemployment, or family problems, but such loans are given out of the Zakah fund managed by the bank. Normal credit procedures are waived in most cases and, upon failure to repay the loan, the debtor is usually given an extension or simply forgiven altogether.

Credit for short-, medium-, and long-term periods is available for business enterprises on a profit-sharing basis. Such loans are made to finance working capital needs or specific projects and operations. The bank providing the loan becomes a partner for a limited period for the specified purpose of the loan and participates in the profits and losses of the period or operation according to the profit-sharing agreement signed at the time of granting the loan. It is important to emphasize that the bank shares in the risks of such operations and if losses are incurred, the bank may not be able to recover the original amount of the loan, even though the bank may have collateral or other form of security.

Participation and Profit Sharing

Islamic banks invest some of their funds in several forms of joint

ownership, the most common form of which is the acquisition of an equity in certain projects by contributing to the capital of the project as a partner. The bank participates in the management of the project and shares in the profits and losses. This form of equity financing combines some features of the familiar partnership agreement with features of shareholding companies. The bank's equity in the project is in the form of common shares which can be sold at will, and the bank's liability for the losses of the project is limited to its equity. In the meantime, the financing agreement gives the bank the right to participate in the management of the project and shares in the profits and losses as a partner. The terms of this kind of participation agreement are similar to the conditions requiring the application of the equity method of accounting for intercompany investments.

Another form of participation and profit sharing is known as murabaha. The murabaha model permits the bank to finance the purchase of commodities, present or future, in return for a share in the profits realized when the goods are sold. If losses are incurred, the bank may or may not share in the loss, depending on the provisions of the murabaha agreement.

Participation agreements play a significant role in real estate and land development. In one form of participation agreement, the bank finances the development and construction on a piece of land owned by an individual or organization. The two parties enter into a partnership agreement to share revenues of the project. The agreement usually gives the owner of the land the right to purchase the building from the bank or to sell the land to the bank at current market prices.

Lease-sale agreements are also practiced by Islamic banks through which the bank develops a housing project and leases the apartments to low-income families with an option to buy. If the lessee decides to buy the apartment, the periodic lease payments are applied to the selling price.

Mudaraba

Modern Islamic economics relies on the concept of mudaraba to define an investment model consistent with the Islamic Shari'ah. The mudaraba model is seen as a mechanism to develop an Islamic capital market which attracts savings of Muslims and makes them available for investment in ventures that conform to the Islamic Shari'ah.

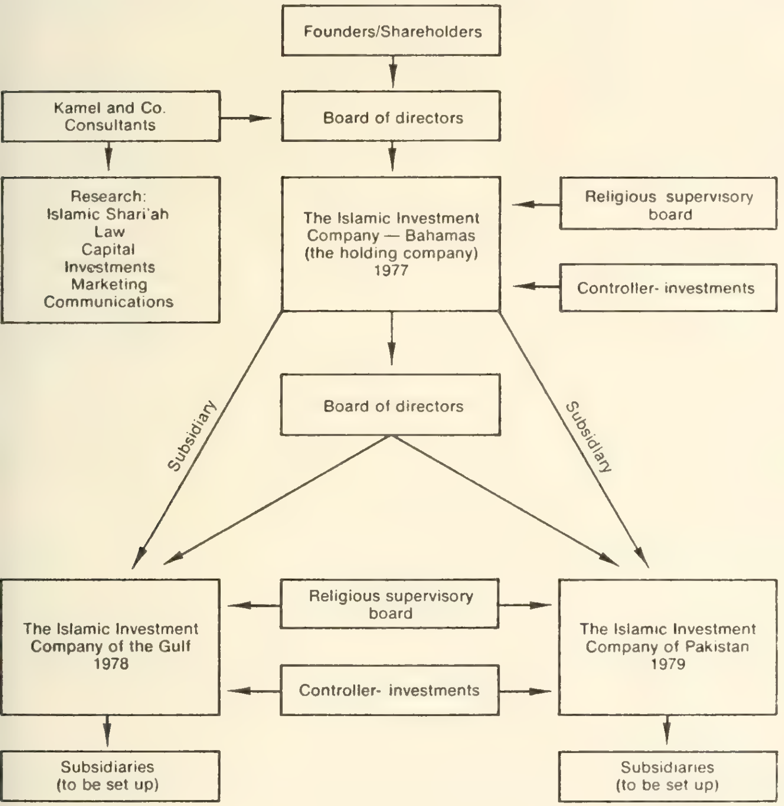
Basically, mudaraba is a contractual relationship in which an investor supplies capital to an agent/manager for a fixed period of time

in return for a share in the profits resulting from investing capital during that period. The mudaraba contract has the following elements:

1. The investor provides the agent/manager (mudareb) with an amount of capital to be invested in a given venture for a fixed period.
2. The investor subscribes to a given venture by purchasing mudaraba investment certificates issued by the agent/manager institution.
3. Investment certificates are issued in series with each issue separate and independent from other issues with respect to time duration, type of venture, and profit-and-loss sharing.
4. Profits and losses are calculated for each individual issue of mudaraba certificates at the end of the mudaraba period. If the mudaraba venture produces profits, the investment certificates of that mudaraba are redeemed at face value plus a share in profits calculated according to the profit percentage declared at the time of subscription. If losses are incurred, the investor's legal liability is limited to the face value of the investment certificates purchased. If the mudaraba activity continues beyond the redemption date, the certificates are redeemed at their value.
5. The agent/manager institution issuing the investment certificates is entitled to a share in the profits of each mudaraba on the grounds that it contributed effort and know-how to the operations of the mudaraba. If the mudaraba results in losses, the agent is not liable for such losses to the investor or to the third party. Islamic economists justify this by reasoning that the agent does not receive any return for his or her efforts in cases of loss. In all cases, the agent is entitled to recover all expenses actually incurred in the operations of the mudaraba before profits and losses are determined.

The Islamic Investment Company (ICC, Ltd.) was begun in the Bahamas in June 1977 by a number of Muslim businesses as a multinational investment holding company whose primary purpose is to set up mudaraba companies in various parts of the Muslim world. The ICC shares are exclusively owned by its founders — a small number of wealthy Muslims and some governments of Muslim countries (ICC articles of association include a provision to make its shares available for subscription by Muslims at an appropriate date in the future). The ICC has already established two mudaraba subsidiaries in Sharjah and Pakistan. Exhibit 2 is the organizational chart of the ICC as described in its articles of association.

Exhibit 2. ICC Organization Chart



In addition to mudaraba and investment certificates, the ICC issues loan certificates which are purchased for a fixed period of time after which the holder is guaranteed the original price paid. These certificates are risk free and therefore not eligible for profits. Loans of this nature are known in Islamic Shari'ah as good-faith loans. Muslims not wishing to expose their savings to the risks associated with investment are provided an opportunity to conform to the Islamic principles which prohibit interest and hoarding. Loan certificates pay no interest and put savings to productive use thereby contributing to the welfare of the Islamic economy without exposing these savings to any risk. The religious justification of loan certificates is not disputable, but there is some question as to their economic equity. Redemption of loan certificates at face value without any adjustment for the effect of inflation means that a Muslim providing a good-faith loan suffers a material economic loss. Islamic scholars should address that question since the religious foundation for good-faith loans does not justify an economic loss to the provider of the loan.

Reporting the Results of Operations of an Islamic Bank

An Islamic Bank is an accounting and legal entity separate and distinct from the entity of investment deposits. Consequently, it must prepare separate financial statements for the benefit of its shareholders. Its income statement (exhibit 3) will show the results of all its activities, including the profits earned on the general investment of its shareholders' capital, as well as its share in the profits on investments of depositors. The following format is a standard form for reporting the results of operations of an Islamic bank.

Exhibit 3. Arab Islamic Bank Income Statement for the Period Ended December 31, 198X

Revenues		
Income from general investments	XXX	
Gains on sale of general investments	XXX	
Commissions on banking services	XXX	
Share in profits of deposits committed for investment	XXX	
Miscellaneous revenues	XXX	
Total revenues		XXX
Expenses		
Wages and salaries	XXX	
Administrative and general expenses	XXX	
Allowance for decline in the market value of general investments	XXX	
Depreciation on fixed assets	XXX	

Exhibit 3 (cont.)

Commissions to correspondent banks and investment agents		XXX	
Miscellaneous expenses		XXX	
Total expenses			XXX
Net income for the year			XXX
Proposed distribution of net income			
Legal reserve	XX		
General reserve	XX		
Remuneration of members of the board of directors	XX		
Dividend distributions	XX		
Total distributions			XXX
Undistributed profits added to unrestricted retained earnings			XXX

The Islamic Development Bank

Economic development is a top priority in most Muslim nations. Muslim governments recognize an urgent need to raise the standard of living of their people by improving the infrastructure, land reclamation, irrigation projects, building and operating industrial plants, and transfer of technology. The Islamic view of progress is that industrialization and modernization should relate the goal of economic development to the social and cultural context in which it occurs. Most Muslims strongly believe that economic development must conform to the Islamic Shari'ah. Meanwhile governments of Muslim countries that have no oil wealth have had little success in economic development largely due to the lack of capital and the heavy burden of interest on foreign debt. For these reasons, Muslim governments felt that an Islamic Development Bank (IDB) is a vital necessity. The IDB was founded in 1975 as a multinational corporation with headquarters in Jidda, Saudi Arabia. Subscribers to the IDB capital are governments of Islamic nations (or nations with sizable Muslim population); the IDB articles of association are in the form of a multigovernment treaty. The IDB's stated objective is to support social and economic development in Islamic countries within an Islamic framework. The activities of the IDB include (1) direct investment in social and economic projects such as public utilities, transportation, industrial development, and feasibility studies in member countries; (2) joint investment through equity financing of commercial, financial, and industrial projects; (3) provision of interest-free loans for industrial

projects undertaken by the private or public sector in member countries; (4) finance of foreign trade among member countries and provision of hard currencies to finance foreign trade between members and industrialized nations; (5) establishment of special funds to provide economic aid to Muslim societies in nonmember countries such as India; (6) provision of free-of-charge technical assistance such as feasibility studies, training of natives, and recruiting of skilled labor; (7) extensive studies on the conformity of certain economic activities to the rules of the Islamic Shari'ah; (8) participation in the establishment and operations of Islamic banks by providing hard currencies; and (9) acceptance of deposits from member countries on a noninterest basis. The IDB is expected to become the central bank for Islamic banks all over the world.

Management of Islamic Banks

According to the guidelines established by the International Federation of Islamic Banks, the top management of an Islamic bank shall consist of the board of directors, the general assembly, the religious supervisory board, and two independent auditors. The structure and functions of the board of directors and the general assembly of an Islamic bank are similar to those of Western-style banks. The religious supervisory board and the use of the services of two outside auditors instead of one distinguishes the management of Islamic banks.

The religious supervisory board consists of members appointed and remunerated by the general assembly from the community of Islamic scholars known for their competence in the Islamic Shari'ah, Islamic economics, and comparative law. The functions and responsibilities of the board are similar to those of the independent auditor in some respects. The board is independent of management and has considerable authority to review and monitor the financial and investment activities of an Islamic bank to ensure compliance with the Islamic Shari'ah. The board is also required to present an annual report to the general assembly concerning management's compliance with the Islamic Shari'ah.

Islamic banks receive funds for investment from two groups, the shareholders and the holders of investment deposits or mudaraba certificates. These two groups receive different distributions of profits and assume different legal responsibilities, which gives rise to conflict of interests. Consequently, an Islamic bank is required to have two independent auditors to represent the interests of each of these two groups.

A review of the articles of association of existing Islamic banks by this author revealed that the guidelines provided by the International Federation of Islamic Banks are not yet fully applied. For example, only the Islamic Investment Company has two auditors and a religious supervisory board.

ACCOUNTING IMPLICATIONS

The revival of Islamic economic thought and the growing trend toward unifying Muslims into a political-economic entity are powerful forces behind many recent economic developments in the Islamic nations. These developments include (1) the drive to establish an Islamic economic system in which all usurious practices are eliminated and the rate of return in profits on invested capital assumes the function of allocating capital to competing projects, (2) the establishment of a network of Islamic banks to match savings and investments according to the Islamic Shari'ah, (3) the drive to create an Islamic common market, (4) the continuing efforts to establish Islamic stock markets, and (5) the growing trend to harmonize companies' acts in Islamic countries. These developments could eventually lead to the creation of a uniform business environment and uniform capital markets with Islamic characteristics. As a result of these developments, the environment of corporate reporting in Islamic countries will be characterized by political, social, and economic forces different from the forces found in the Western business environment. Since political and economic forces are constraints on the objectives of corporate reporting and accounting standards, the emergence of an Islamic model of accounting is a real possibility.

The possibility of an Islamic accounting model has important implications for the international regulation of accounting standards and for the internationalization of the accounting profession through the expansion of the operations of the U.S.-based Big 8 firms. The factors which gave impetus to the formation of the International Accounting Standards Committee (IASC) include the increasing internationalization of business, the growth of international capital markets, and the growing internationalization of the accounting profession.[12]

From its inception, the intention of IASC has been to produce basic international standards to be applied by the profession of each country according to their knowledge of the local conditions of the

[12] M. C. Wells and M. A. Islam, "International Accounting Standards: An Antipodean View," Proceedings of the 1980 American Accounting Association Annual Meeting held in Boston, Massachusetts.

business environment and the objectives of the international standards. Wells has observed that this approach assumes that there is some need for some commonality. He also observes that accounting standards "have had and continue to have a very nationalistic flavour and the national differences have been documented."[13] It is becoming more evident that national differences reflect differences in incompatible philosophies that make international accounting standards unenforceable. McComb has observed that the objectives of IASC and the objectives of the European Economic Community (EEC) harmonization program are based on incompatible philosophies. He also observes that the existence of two economic philosophies within the EEC — macro-oriented versus micro-oriented countries — leads to variations in perception of the objectives of corporate business organizations and differences in the ranking of the objectives of accounting for business organizations.[14] The emergence of an Islamic accounting model makes the arguments of Wells and McComb very plausible. It is becoming clear that accounting standards in different countries reflect cultural differences, differences in political philosophies, and differences in the legal environments of different countries. Therefore, IASC should modify its objective. Instead of producing unenforceable international standards which serve no useful purpose, IASC should direct its efforts to the identification of the differences in the business environment in different countries and the way in which such differences are related to national accounting standards. Furthermore, IASC should not assume that international accounting standards serve as useful examples for the emerging nations. The economic environment and the national objectives of the emerging nations can best be served by adoption of local standards.

Islamic banking is at an early stage of development and many detailed rules for its operations are yet to be developed. Nevertheless, that limited application of Islamic economics has given rise to unique accounting problems that might eventually produce an Islamic accounting model. Accounting education in some Islamic countries is being revised to conform to Islamic Shari'ah. Specialized courses in Islamic economics are required courses for all accounting students at most universities in Saudi Arabia. While teaching at Kuwait University in the last two years, the author of this paper served on a com-

[13] Ibid.

[14] Desmond McComb, "International Accounting Standards and the E.E.C. Harmonization Program: A Conflict of Disparate Objectives," Proceedings of the 1980 American Accounting Association Annual Meeting held in Boston, Massachusetts.

mittee to redefine the objectives and contents of the accounting program. The committee revised the content of two courses, Accounting for Financial Institutions, and Corporate Financial Accounting. The revisions introduced the accounting problems of noninterest banking as well as accounting aspects of corporations which limit their capital structure to equity financing using the Islamic model of corporate finance.

The most interesting accounting aspect of Islamic banking in the view of this author is that an Islamic bank is a legal entity comprising the accounting entities of the Zakah fund, normal banking operations, investment deposits, and general investments.

The Zakah fund is similar to a trust fund. Moneys collected as Zakah are placed in an Islamic bank which acts as a trustee. The bank distributes the Zakah money to beneficiaries who meet the conditions specified in the Islamic Shari'ah, and it is also authorized to invest any undistributed money at the end of the year and to add the profits from this investment to the Zakah collected in the following year. The Islamic bank is accountable to the religious supervisory board in administering the Zakah fund and should keep a separate set of records for the Zakah fund and prepare a charge-discharge type of statement at the end of the reporting period. Thus, the Zakah fund is an accounting entity subject to the principles of fiduciary accounting.

The great diversity and frequency of normal banking services make it imperative for an Islamic bank to keep a separate set of records for such services. Normal banking services involve a relatively low degree of risk to the bank when compared with investment activities. These services are provided to customers for a service charge in the form of a flat fee. The fees from such services should cover the costs of providing the services plus a fair return to the bank as a profit-making institution. The bank should keep a separate set of records for such services in order to have factual information to be used to determine the appropriate fees for different services.

A separate set of records should be kept for investment deposits. The relationship between the bank and the owners of investment deposits is fundamentally different from its relationship with its shareholders. The bank acts as an agent/manager or as a partner when investing the deposits and receives a predetermined percentage of profits from investment. Thus, the profits from these investments do not accrue to the bank and the bank's share in profits cannot be determined before profit on invested deposits is separately measured. The separate measurement of profits on invested deposits is also essen-

tial for determining the profit share of each depositor. The main accounting problems associated with measuring profits on invested deposits cannot be resolved unless the bank keeps a separate record for these investments. Two important accounting problems are unique to invested deposits, the first of which involves the determination of expenses that are properly chargeable to revenues and gains earned on investments. The rules for determining such costs are controversial. But the interesting point is that issues of cost allocation are resolved by reference to the Islamic Fiqh which procedure is not a generally accepted accounting standard. The second important problem involves the basis for asset valuation. The Islamic model of mudarabah does not recognize the going-concern assumption. This implies that the basis for asset valuation and income determination is liquidation or exit values. Meanwhile, there is ample evidence in the Islamic Shari'ah in support of realization as the test for profit recognition.

As mentioned before, the bank is required to publish separate financial statements on investment deposits as a separate entity and to provide an independent auditor. Thus, there is an interesting problem with two auditors representing two different groups of investors with conflicting objectives who examine the same set of data.

APPENDIX 1. KUWAIT FINANCIAL HOUSE*

Profit and Loss Statement and Profit Distribution Statement for the Year Ended December 31, 1979

	Notes	*1978 K.D.*[1]	*1979 K.D.*
Revenues			
Commissions on banking services		26,287	370,531
Gains on sales of investment		609,120	3,589,922
Investment income		281,020	691,712
Miscellaneous revenues		—	20,638
		916,427	4,672,803
Administrative and general expenses			
Wages and salaries		166,751	675,860
General administration		140,433	267,191
Allowance for decline in the market value of investments		79,586	—
Allowance for uncollectibles		—	250,000
Net profit for the year		529,657	3,479,752
Distribution of annual profits			
Legal appropriation		52,966	343,975

General appropriation	52,966	343,975
Kuwait Institute of Scientific Research	16,529	31,056
Remuneration to members of the board of directors	15,000	40,000
Dividend distributions to deposits for investment	146,100	2,474,650
Shareholders' profits for the year	246,090	246,090
Total	529,657	3,479,752

The Balance Sheet as of December 31, 1979

	1978 *K.D.*	*1979* *K.D.*
Assets		
Cash and deposits with other banks	16,177,909	12,681,411
Customer finances		
Foreign trade and murabaha contracts	45,038	2,108,004
Other debts	—	555,060
Accounts receivable and prepaid items	1,615,175	22,025,920
Investments in real estate and real estate securities	7,959,009	32,443,691
Real estate under construction	—	571,410
Total current assets	25,797,131	70,385,496
Medium-run receivables	—	3,469,068
Other assets and investments	—	1,280,931
Fixed assets	69,204	124,575
Total assets	25,866,335	75,260,070
Customers' obligations for letters of guarantee	893,166	6,334,031
	26,759,501	81,594,101
Liabilities		
Current accounts	10,535,398	16,138,618
Saving accounts	4,899,822	21,368,106
Deposits for investment-limited	456,986	3,186,454
Deposits for investment-unlimited	5,119,888	25,505,505
	21,012,094	66,198,728
Payables and creditors	1,859,153	2,842,306
Dividend distributions to deposits for investment	146,100	2,474,650
Dividend distributions to shareholders	—	492,192
	23,053,347	72,117,876
Sharecapital		
Authorized and issued 10 million shares 1 K.D. par; subscribed 9,843,840 only 25% of par value paid	2,460,960	2,460,960
Appropriations		
Legal appropriation	52,966	396,941
General appropriation	52,966	394,293
Undistributed profits	246,096	—
Total shareholders' equity	2,812,988	3,252,194
Total liabilities and shareholders' equity	25,866,335	75,260,070

Obligations on letters of guarantees issued to customers	893,166	6,334,031
Total	26,759,501	81,594,101

* Source — President of Kuwait Financial House, 1979 Annual Report (Kuwait), translated by the author.
[1] K.D. = Kuwaiti dinar; one K.D. = 3.7 U.S. dollars.

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Development of Belgian Accounting Standards within the European Economic Community Framework

CHRIS J. L. LEFEBVRE*

Since World War II, and particularly during the past decade, we have observed an accelerated evolution toward the internationalization of accountancy and of the accounting profession, together with increasing efforts devoted to the standardization of accounting requirements. This led to the elaboration of International Accounting Standards that could possibly be superseded by World Accounting Standards.

GENERAL CONSIDERATIONS ON THE ACCOUNTING SITUATION WITHIN THE EUROPEAN ECONOMIC COMMUNITY (EEC)

A Heterogeneous Situation

Due to the historical evolution over hundreds of years and the different legal and commercial environments within the nine[1] member countries, the accounting situation within the EEC is so heterogeneous that very important efforts toward harmonization were considered necessary and were undertaken by the EEC commission in the late sixties and the beginning of the seventies. The commission published a draft of the

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The author expresses his appreciation and indebtedness to Prof. R. Delbeke and Prof. W. E. Thomas for their critical and helpful comments. However, they cannot be held responsible for remaining errors, ambiguities, and shortcomings. That pleasure remains only with the author.

[1] Greece joined the EEC as the tenth member in January 1981, after the research for this paper had been completed.

Fourth Directive in November 1971, which was amended and reissued in February 1974. The Fourth Directive was finally adopted on July 25, 1978.

Public versus Private Sector

An important feature of the accounting situation within the European Community lies in the fact that the development of financial accounting policies has not been trusted to the "private" sector alone. On the contrary, in most EEC countries, the elaboration of financial accounting regulation occurs through the "public" sector, through laws and royal or governmental decrees, specifying minimum legal and accounting requirements. Moreover, the political forces (both government and parliament) play a considerable role regardless of the contribution from professional accounting sources. The author certainly admits that this situation differs from country to country, and that some EEC countries want to show a greater or lesser autonomy in the establishment of accounting standards. In this respect, the Netherlands, as well as the United Kingdom, presents a very hybrid system. Company laws (*Wet op de Jaarrekeningen 1970,* Act on Annual Accounts, in the Netherlands, and several companies acts in the United Kingdom) interfere with a certain autonomy in the elaboration of accounting principles given to the local accounting profession. Furthermore, the harmonization of legal and accounting requirements within the EEC is certainly hampered by the fear of the accounting profession of losing an already "limited" but strongly stressed autonomy concerning the development of accounting standards. Perhaps a typical example of this mechanism has been the great effort of the Dutch accounting profession to insert the possibility of applying the *vervangingswaardeleer* (replacement cost theory) in the previously mentioned draft of a fourth directive which contained detailed legal requirements as to the form and content of financial statements for the *kapitaalvennootschappen* or limited companies.

Nostalgia for Generally Accepted Accounting Principles (GAAP) and Legal Issues Involved

Reference should also be made to the very important place the American GAAPs hold in the process of issuing more widely accepted accounting principles. We can assess a certain "nostalgia" for these GAAPs resulting in the "rumination" and "rephrasing" of a terminology that has for years been common property in and outside the United States. The real issues, however, involved in the harmoniza-

tion process do not center in this area. They are essentially to be found in the existing legal constraints among the different nations which most desire to maintain their autonomy and to control and even protect their economy. As long as these legal barriers do exist, the harmonization process will be delayed. The typical situation of binational and multinational companies, which must comply with different commercial codes, and of companies with subsidiaries in different countries but keeping their accounts in headquarters are illustrations of the legal problems involved in this process. In this way, some very intricate legal constructions have been created either to avoid clear-cut national controls or to comply with existing internal regulations. It is easily understood that the financial reports of such conglmerates are sometimes very difficult to fathom and that consolidation is hampered by the various definitions and legal interpretations of what is to be considered a financial "group" in the different countries.

Regional Harmonization: A Workable Experiment

Before directing our attention to the Belgian accounting situation, it should be recalled that the regional harmonization process within the nine EEC member countries, although difficult — due to legal and other constraints and to differences in terminology — might still be a more feasible working model. This could become an important first step toward worldwide accounting harmonization.

SOME OBSERVATIONS ON THE BELGIAN ACCOUNTING ENVIRONMENT

Previous Legislation Outdated

Until the 1970s, the existing legislation relating to annual accounts in Belgium was dated and obsolete. The legislation was very imprecise as to the officially requested disclosure of financial data. The Code Savary of 1673 issued under the reign of Louis XIV formed the basis of the Napoleonic Code of Commerce (1803). This Code of Commerce contained stipulations concerning the books of commerce (to be kept) and on bankruptcy. It was this latter Code of Commerce that served as the basis for the elaboration of the Belgian Company Law of 1873, in which the stock issue, the statutes of the Société Anonyme, limited company (S.A.), the disclosure of annual accounts, and the statute of the commissioners (*commissarissen — commissaires*) and the directors, were regulated. The No. 185-Act (1935) installed the bank commission and stipulated that all banks drawing (raising) public funds had to eliminate their risk-bearing activities — to protect depositors — and include bank auditors (*bankrevisoren-Reviseurs de Banque*)

among their commissioners. After World War II, an act was approved by parliament (1953) establishing the Auditors' or Revisors' Institute (*Instituut der Bedrijfsrevisoren — Institut des Reviseurs d'Entreprises*). It became effective only after a new act was passed (1953), requesting that companies listed on the Stock Exchange should appoint at least one commissioner-revisor (*commissaris-revisor — commissaire-reviseur*) among its commissioners, and that this commissioner-revisor should be chosen from the members of the newly appointed accounting institute.

Only a few disclosure requirements existed until 1975. The published balance sheets were often referred to as the "visiting card format" or "pocket size" balance sheets. Although it was officially satisfactory to show only six items on the balance sheet and "sufficient" depreciation allowances on the profit and loss account, many Belgian limited companies did not confine themselves to those legal requirements. This does not imply, however, that the volume of disclosed information was sufficient to meet the needs of the users of financial statements. Moreover, the published balance sheets were and are still essentially fiscal balance sheets due to the fact that tax advantages only apply when they are recorded. The same phenomenon can also be observed in many EEC countries and reduces considerably its use for decision-making purposes, obstructing the comparability of the published accounts.

Low Public Interest

One of the typical characteristics of the Belgian economy is that the development of the industrial sector has been financed through a few very powerful holding companies, such as the *Generale Maatschappij-Société Générale,* established in 1822. This method of financing industrial development has had some important repercussions on the published financial statements, in that the holding companies were not very interested in the disclosure of information to third parties. On the other hand, the outstanding shares belonging to third parties, other than the holding companies mentioned earlier, were rather unimportant so that the public interest in the publication of such statements was rather low.[2] In recent years, however, the demand for information became more insistent and academicians, workers' councils, financial analysts, consultants, and even governmental agencies urged the enterprise to provide increased information. This led to the establishment of different accounting groupings on the firm's records (Standard or

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[2] See *Morphologie des Groupes Financiers,* 2nd ed. (Bruxelles: CRISP, 1966), for an analysis of the Belgian industrial and financial community.

Uniform Chart of Accounts),[3] the Statute of the Accounting Profession (Titles of Bookkeeper, Accountant and Revisor),[4] and the Company Disclosure Recommendations.[5]

Creditor Protection

The phenomenon of private financing through holding companies, together with important debt financing through banks, had a considerable influence on the establishment of legal accounting requirements. Creditor protection (*Kreditürenschutz*) rather than investor decision making took a very important place in the disclosure requirements imposed on the companies. In this context, the financial position of the company as shown on a conservative balance sheet was viewed as more important than a correct determination of income and a detailed profit and loss account. The "pocket-size" balance sheet disclosure regulations illustrate this point. Although creditor protection might be very important, resulting in a stronger emphasis on the balance sheet items shown in the financial reports, we should not forget the considerable fiscal influences, thus restricting the usefulness of such balance sheets primarily prepared to serve tax purposes. Moreover, this private financing through holding companies reduced the importance of detailed external controls performed by the commissioner-revisors and of their reports.

Overall Fiscal Influence

As previously mentioned, Belgian accounting practices are dominated by fiscal laws which cause distortions in the balance sheet. An example will clarify this point. To stimulate investments, the Belgian government recently provided investment grants taking the form of a 100 percent depreciation allowance, being accepted for tax purposes, to the amount exceeding the average investments as compared to the investments made by those companies during the same period. To be able to benefit from this tax relief, however, these depreciation allowances to 100 percent had to be recorded, thus expensing assets. This procedure, if applied, creates hidden reserves. If, on the other hand, these entirely depreciated assets were revalued (a revaluation account must be created), this would cause an increase in owner's equity as compared to the previous situation, opening the possibilities of further write-offs. This strong reliance on fiscal and statutory provisions that

[3] The Geullette Commission, 1964.
[4] The Féaux Commission, 1964.
[5] The Oleffe Commission, 1967.

can also be observed in other EEC-member countries influences to a considerable extent the financial position and the financial statements of a company.

NEW LEGAL ACCOUNTING REQUIREMENTS IN BELGIUM

Economic and Social Conference 1970

The Economic and Social Conference of 1970 can be considered as an important event in the evolution of improved accounting requirements. The main interest of that conference was in the development of financial and economic information to be provided to the Industrial Relations Councils (I.R. Councils) or Workers' Councils. Meanwhile, a price control act was passed by Parliament on July 31, 1971, which provided for a uniform or standard chart of accounts to be issued later by royal decree and to become compulsory for large firms. As to the Company Disclosure Rules, a great many controversies arose, especially between adherents favoring "disclosure" requirements and those favoring "registration" rules. These conflicting views were somewhat incorporated by the publication of the EEC's proposal of a Fourth Directive (1971). This directive attempted to harmonize disclosure rules for annual reports of corporations. For all these matters, a National Economic Council was to advise the government on the further steps needed for the company disclosure requirements.

Although much disagreement remained concerning the proposition of advice on Financial and Economic Information for the I.R. Council, a royal decree was issued on November 27, 1973.[6] As to the financial reporting disclosure requirements (annual accounts), an advice was issued by the National Economic Council on June 12, 1972. It was, however, not until July 17, 1975, after several drafts had been considered, that the Act on Accounting and Annual Reports of Firms (*Wet op de boekhouding en jaarrekening van de ondernemingen*) was enacted.[7] Based on this act, some important royal decrees were enacted: (October 8, 1976) the Accountancy and Annual Accounts of Enterprises, dealing with the form and content of the annual accounts to be published[8] and the minimum uniform (or Standard) Chart of Accounts (*Als minimum geldend genormaliseerd rekeningstelsel*) (March 7, 1978).[9] Although a further recommendation was given to the government by the National Economic Council (July 12, 1972), on com-

[6] *Official Gazette,* 28 November 1973, pp. 13.352-.366.
[7] *Official Gazette,* 4 September 1975, pp. 10.847-.851.
[8] *Official Gazette,* 19 October 1976, pp. 13.460-.500.
[9] *Official Gazette,* 13 May 1978, pp. 5.563-.585.

pany auditing (*Hervorming van het statuut van het Revisoraat*), no law or royal decree has yet been enacted dealing with this matter.

Royal Decree on Financial and Economic Information for the I.R. Councils (November 27, 1973)

This royal decree is based on the 1948 act which created the Industrial Relations Councils. They were established at the individual firm level and were composed of equal representation of the employees and the employer. The royal decree gave them the right of information, together with the right of appealing to a *revisor* (auditor) for supplementary comments on the accounting system and on the annual accounts. Because the published annual accounts until then were rather meaningless and since the I.R. Councils judged that the position of the *revisor* was one of independence, very few I.R. Councils really appealed to the *revisor* for additional explanations. The I.R. Councils, supported by the trade unions, were essentially more concerned that better information be disclosed by the company than were the shareholders. This situation was partially due to the small amount of outstanding shares owned by the public (see the earlier section on low public interest) and their preference for relatively risk-free investments. These risk-free investments were made abundantly available by the frequent issues of governmental bonds and securities in the capital market to cope with the tremendous financial needs of the government.

General regulations of the royal decree of November 27, 1973. The information to be provided to the I.R. Councils must be communicated by the director of the company (*ondernemingshoofd*) or by his delegate. The fundamental aim of the royal decree as described in section 3 is to provide employees with a clear and correct picture (a true and fair view) of the economic and financial situation of the enterprise, together with the impact of economic and financial data on the firm's management as to organization, employment, and personnel. Moreover, this information must enable the workers to understand the firm's situation within the larger economic and financial entity (holding company) and even within the larger economic environment, such as the branch or trade (sector) in which the firm operates, the regional, national, and international economy. In this respect, it has been one of the main concerns of this royal decree to provide the I.R. Councils with at least as much information as is supplied to the shareholders. Furthermore, the royal decree distinguished four organizational levels for which information is essentially to be disclosed: (1) the economic and financial entity (based either upon intercompany rela-

tionships or upon contractual links); (2) the legal entity (based upon company law, business law, and a civil law); (3) the enterprise or firm defined as a "technical business unit"; and (4) the "managerial" unit (*onderdeel — sous-ensemble*), defined as a more or less independent responsibility center.

Content and frequency of information. The information to be delivered to the I.R. Councils can broadly be classified into four levels.

1. Basic information. A written report, including statistics and useful references, must be supplied to the I.R. Councils at least two months after their election or re-election, and be discussed during special meetings of the I.R. Councils for a minimum of eight hours. The I.R. Councils must have the opportunity to study this basic information for at least fourteen days. The basic information consists of details concerning the firm's statute (legal status), the firm's market position, production and productivity, the firm's financial structure (or of the legal, economic or financial entity), the budgetary and costing system, data about personnel expenses and staff charges, the firm's program and general expectations, actual and projected policy in the field of scientific research and development, any kind of governmental or public aid granted to the firm, and the firm's organizational chart, describing the internal organization, the hierarchic structure, and the competence and responsibility as distributed within the firm.
2. Annual information. This must be provided to the I.R. Council prior to the general annual meeting of stockholders. The general purpose consists in informing the I.R. Councils as well of the state and the changes of the firm during the past year as well as next year's objectives and expectations. This information attempts particularly to allow the I.R. Council to form an opinion concerning the firm's financial stability, liquidity, and profitability, and concerning the prospects for the employees. The documents to be provided consist of the balance sheet, the profit and loss account, an annex, the management report, and, if so required by the commercial code, the auditor's report. This annual information updates to a considerable extent the basic information provided previously to the I.R. Councils. A special and important requirement of the decree stipulates that the I.R. Council's opinion and comments upon the annual report are to be submitted to the stockholders' annual meeting, the purpose being to promote communication between "labor" and "capital."
3. Periodical information. Periodical reports must be provided at least quarterly to enable the I.R. Councils to follow the development in the

firm's business. It also allows the I.R. Councils to account for variances between the objectives fixed by management and actual performance, and contains information on sales volumes, orders, market position, production, costs and cost prices, stocks, productivity, employment, realization of the program fixed by the firm, and the future evolutions thereof.
4. Occasional reports. These occasional reports are to be submitted to the I.R. Councils whenever special events that have a considerable effect on the firm might occur, or when important internal decisions are taken that might influence the firm's position. This information must be provided, if possible, before its execution, and no delay is allowed in informing the I.R. Councils.

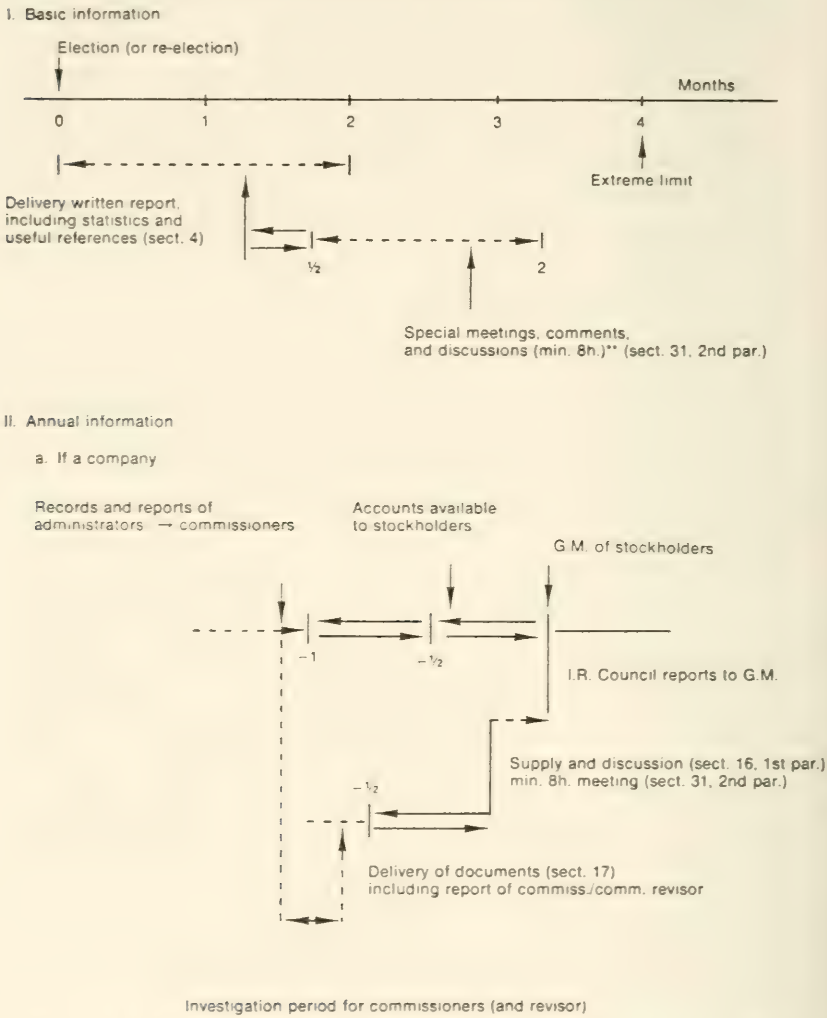
Moreover, any document given to the shareholders or partners in the company must also be given to the I.R. Councils.

Further comments. The content of the information provided to the I.R. Councils must be comprehensive, including accounting data as well as statistics and further explanations. For statistical information and financial data to be handed to the I.R. Councils, a five year summary is requested.

Since one of the responsibilities of the I.R. Council delegates consists of informing the workers of the economic and financial situation and the prospects of the firm, the delegates should be allowed to release that information to the constituency (employees). In this area, a great controversy arose between employers and trade unions as to what extent "confidential" information that could damage the firm's interests might be released. The royal decree therefore stipulated that some information — if thus indicated by management — could be considered as "confidential" and that the workers' representatives should in general observe necessary discretion in releasing information to the workers. These provisions considerably obstruct the attainment of the goals stated in this royal decree in that (1) the director or his delegate(s) can classify important information as "confidential" impeding its release to the workers, and (2) the legal responsibility of the workers' delegates to observe necessary discretion becomes involved; they may become more reluctant to inform their constituency for fear of possible prosecution.

The firm has no commitment whatsoever to publish this more extensive information previously mentioned to other parties not represented on the I.R. Councils, including middle and lower management of the firm as well as shareholders, creditors, and so on. In this respect, we might easily assert that if the provisions of the royal decree are met,

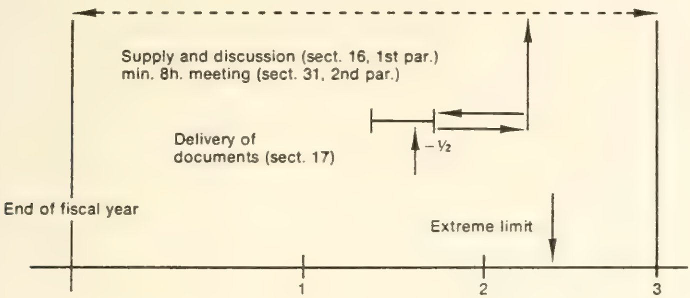
Exhibit 1. Schedule Illustrating Frequency of Information*



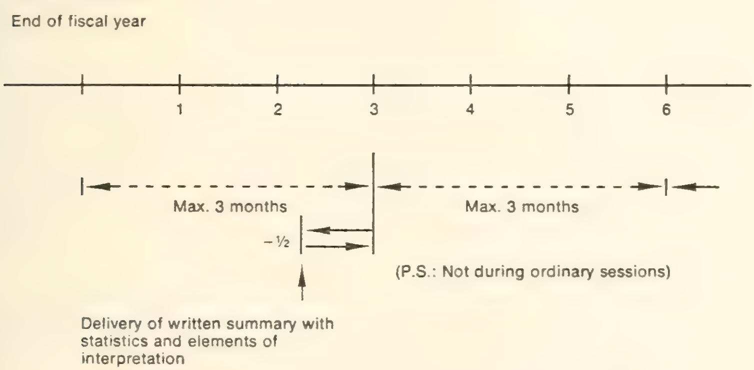
* Based on R. Delbeke, "Auditing Special Topics," Katholieke Universiteit Leuven, 1974.
** The eight-hour minimum for special meetings of the I.R. Councils.

Exhibit 1 (cont.)

b. If not a company



III. Periodic information



IV. Occasional information

Events with considerable effect on the firm
Internal decisions with considerable effect on the firm } sect. 25

If possible, before execution

\+ Written summary if statistics (sect. 26, 2nd par.)

(No delay, until quarterly meeting)

the I.R. Councils will be better informed of the real situation of the firm than are its shareholders. This brings us to another consideration concerning the application of the royal decree. From observations by the *Algemeen Christelijk Vakverbond,* or General Christian Trade Union, in a number of industries, it appears that the application of the royal decree is not so scrupulously observed in all enterprises, thus significantly reducing the information distributed to the workers and the workers' councils. Further investigation into the nature of the absent information and into the various reasons why they are missing should be undertaken.

As the comprehension of the complexity of a modern firm's operations and accounts for outsiders (nonspecialists, such as workers' delegates) is not easy, the royal decree provides possible assistance that might be given to the I.R. Councils' delegates by so-called "experts" to help them understand the reports and information given to them. All specified documents and reports must be available at least two weeks before the special I.R. Council's meeting to enable all its members to study the documents. If any dispute arises as to the nomination of these "experts," a procedural settlement is described in the royal decree. There is, of course, a legal presumption that the members of the official auditor's institute are qualified as independent "experts." This places these members in a critical position. I.R. Council members, indeed, expect pronouncements not only concerning the quality of the reports themselves, but also of the going concern and the financial position of the firm.

In conclusion, the main emphasis of this royal decree has been placed on "disclosure" requirements rather than on "registration" regulations. The requirements of the types of reliable information that should be released (disclosed) are indeed more important than are the requirements of how the accounting data must be processed. In this regard, we can refer to the etymological sense of the words where "enregister" means to put into registers (input — op*sluiten van informatie*) and "disclosure" has just the opposite meaning, that is to release information (output — ont*sluiten van informatie*). Moreover, the royal decree introduces the important concept of "segmented reporting," breaking down sales and earnings with regard to product differences, foreign versus domestic exposure, and so on. Furthermore, the royal decree contains a "forward" look, emphasizing goals and programs to be attained and budgetary planning and control. Finally, it is important to make clear that the I.R. Councils have only advisory but no managerial or decision-making power whatsoever in the firm.

Act Relating to the Accountancy and the Annual Accounts of the Enterprises (July 17, 1975)

Enterprises subject to this act. All physical persons who are merchants, the commercial partnerships, and the public institutions engaged in commercial activities as defined by the law are defined as enterprises by the act. Foreign law companies are subject to this act for their Belgian subsidiaries and seats of operation, and the latter are to preserve the whole set of books, accounts, and evidence in Belgium.

Fundamental principles underlying the act. Every enterprise must practice an appropriate accountancy adapted to the nature and scope of its activities. Section 3 of the act states that the principle of completeness as to commercial activities must be respected in that all operations, assets,[10] and rights of any kind, as well as all liabilities, obligations, and commitments of any kind, must be covered. Moreover, separate systems of accounts must be kept for all distinct economic activities of the firm.

The accounting system to be used for the registration of the enterprises' activities is double-entry bookkeeping (accounting) and the operations must be *entered* into one single journal book or in a system of auxiliary journal books, without delay, faithfully and completely, and in chronological order. If a decentralized system of auxiliary books is used by the enterprise, a centralization of all recorded data into a single central journal is to be observed at least monthly.

Methodical transposition (posting) of all registered data from the books into the accounts is requested, and the account codes must be defined in a chart of accounts adapted to the activities of the firm. This provision opened the possibility of issuing a royal decree establishing a normalized chart of accounts and has actually been realized through the publication of the Minimum Normalized (Standard or Uniform) Chart of Accounts (royal decree of March 7, 1978).[11]

Exceptions for small enterprises. The merchants who are physical persons, partnerships under a collective firm, or simple commanditory partnerships — all of them having unlimited liability — and whose turnover figure (sales volume) exclusive value added tax (VAT) for the last financial year does not exceed 15,000,000 Belgian francs (BF) (20,000,000 BF for vendors of petrol or liquified petroleum gas), do not have to comply with these requirements on condition that they

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[10] A great many terminological problems emerged in the translation of the French text into a Dutch version. In this case, the French text was dealing with *avoirs* which implies all "assets" of the firm, while the Dutch counterpart speaks about *tegoeden* which means "receivables."

[11] *Official Gazette,* 13 May 1978, pp. 5563-85.

keep at least three special journal books: a financial daybook (or cash journal), a purchase daybook (incoming invoices), and a sales daybook (outgoing invoices). They should also maintain a register of assets and liabilities in conformity with Section 7 of this act. Penalties, according to Section 17, will only be charged in cases of fraudulent bankruptcy.

Stock-taking duty (Section 7). At least once a year, every enterprise takes a complete inventory of all assets and liabilities, rights and commitments of any kind, in good faith and carefully. This inventory is ordered in conformity with the chart of accounts and the accounts, after reconciliation with the inventory data. It must be summarized in a statement that constitutes the annual accounts. These annual accounts must be recorded in a book or register. The inventory valuation criteria together with the form and content of the annual accounts were not settled within this act but were specified in the royal decree of October 8, 1976.[12]

Evidence and control regulations. All accounting entries must be supported by and should refer to dated pieces of evidence (documents) that are to be kept in original or in copy for ten years. They must be filed in a methodological way. This period of ten years is reduced to three years if the documents are not used as evidence against third parties.

The *books* of accounts of the enterprise (single journal, central journal, three journals referred to in section 5, inventory book) are subject to special control regulations, and comprise the numbering, initialling, and providing of a "visa" ("stamping" of the books). This certification is given by a registrar of the Commercial Court or by the municipal authorities and is free. Alternative procedures can be proposed by royal decree on condition that the regularity, the completeness, and the material continuity of the books is secured.

Chronological entries and permanent record duty of accounts. The accounts must be kept in chronological order without gaps or blanks. If corrections in the accounts must be made, the original entry must remain legible. The enterprises are required to keep their accounts for a period of ten years. The "stamped" records must be retained in the original form. Other books might be kept as original or as a copy.

Disclosure standards and consolidated accounts. Disclosure standards as to the form and content of the balance sheet, profit and loss statement, and the annex were not prescribed in the draft law of July 17, 1975, but were settled by the royal decree of October 8, 1976.

[12] *Official Gazette,* 19 October 1976, pp. 13.460-.500.

As to the consolidation of group accounts, Section 11 of the basic law stipulated that the king could by royal decree require the enterprises to establish and publish consolidated accounts. To date, only holding companies must publish consolidated accounts (royal decree of November 27, 1977).

Accounting Standards Commission. An Accounting Standards Commission (*Commissie voor Boekhoudkundige Normen — Commission des Normes Comptables*) has been established. It has an advisory responsibility to the government and parliament, and a responsibility in developing an accounting doctrine and of formulating the principles of regular accounting through advice and recommendations. Until June 1980, the commission published seven bulletins dealing with general accounting problems and the application of the new accounting legislation.

Exemptions, derogations, and exceptions. Enterprises having on the average not more than fifty employees, a turnover (exclusive VAT) for the last financial year of less than 50,000,000 BF, and a balance sheet total not exceeding 25,000,000 BF are exempted from the application of some of the sections of the basic law dealing with Uniform Chart of Accounts, rules for inventory valuation, format and content of the annual accounts, disclosure standards, and consolidated accounts. Most of these items have been settled in the royal decree of October 8, 1976. Derogations from these rules can be granted by ministerial consent based on the advice from the newly installed Accounting Standards Commission.

Credit and banking institutions, insurance companies, and exchange brokers are also exempted from the application of the royal decree of October 8, 1976. For insurance companies, supervised by the "Control Board of Insurance," a specific Royal Decree on Annual Accounts was issued November 12, 1979,[13] prescribing form and content of the annual accounts, valuation criteria, and disclosure standards. Banks are being supervised by the Banking Commission (installed in 1935) and a specific royal decree on annual accounts for banking institutions is pending. It will have to consider the work performed by the Commission of the European Communities as to the coordination of laws, regulations, and administrative provisions relating to the annual accounts (and consolidated accounts) of banks and other financial institutions (Preliminary Draft of a Council Directive, April 25, 1980).

[13] *Official Gazette,* 20 November 1979.

Penal provisions (Section 17). If the provisions of the basic law are violated consciously by merchants, individuals, administrators, directors, executives, and managers of enterprises, penalties from imprisonment for a period of one month to one year and/or a fine of 50 BF to 10,000 BF (in some cases to be multiplied by 40) were introduced.

Similar penalties were foreseen for commissioners (*commissaris — commissaire,* that is, a member of a company's supervisory board), commissioner-revisors, revisors (public auditors), or independent experts who attested to or approved the annual accounts, when the articles of the law have not been observed, regardless of the fact that they knew the provisions had not been observed or that they did not proceed to what could be considered as sufficient and necessary to ascertain that they have been respected.

Royal Decree of October 8, 1976, on the Annual Accounts of Enterprises[14] Scope. This royal decree was issued to complement the outline law of July 17, 1975, and defines the form and content of annual accounts, the general accounting principles and valuation rules, and the prescribed disclosure thereof. It was essentially based on the first draft of a fourth directive of the EEC Commission, so that it could be easily implemented into the current Belgian legislation. Subsequent changes to the Fourth Directive, mainly due to the accession of three new members to the EEC, resulted in some differences between the Belgian royal decree and the Fourth Directive.

The enterprises subject to the basic law are obliged to comply with this royal decree, taking into account, however, the exemptions mentioned previously in the discussion of the draft law.

General principles. The published annual accounts consist of the balance sheet, the profit and loss statement (income or earnings statement, account of results), forming a composite whole. They must be prepared with clarity, and represent faithfully (fairly) and systematically (consistently) the description and amount of assets and rights (entitlements) of the enterprise, and also description and amount of debts, obligations and commitments, together with owner's equities, as of balance sheet date, and, furthermore, the description and the amount of the costs and revenues for the accounting period ending on that date.

In this respect, a subtle difference in interpretation arises in that the fair reporting of the activities of the firm does not at all automatically imply that the annual accounts deduced therefrom would present a fair

[14] *Official Gazette,* 17 October 1976, pp. 13.460-.500.

view of the assets and liabilities, financial position, and profit or loss of the firm. This was, however, one of the objectives of the Fourth Directive and, as stated previously, was also the main purpose of the financial and economic information to be provided to the Workers' Councils (royal decree of November 27, 1973).

The balance sheet and profit and loss statement must derive directly, without additions or omissions, from the balances of accounts, and the chart of accounts must be designed in such a way as to meet the requirements. Furthermore, no off-sets between assets and liabilities and cost and revenues are allowed unless explicitly mentioned and authorized by this legislation. Examples of allowed off-sets can be found in the balance sheet presentation of net fixed assets, the depreciation for the year being disclosed in the notes to the accounts. The structure of the balance sheet and the profit and loss statement are illustrated in the Appendix.

Special requirements. The balance sheet must be prepared after allowing for dividends by anticipating the decisions of the General Meeting of Shareholders as to profit distribution and retained earnings to be brought forward. The balance sheet is prepared pro forma and subject to the decision of the deciding body.

Since the annual accounts must be comparable to those of the previous accounting period, they must include the comparative figures relating to the previous year. The previous year's accounts might be restated for comparability if changes in the presentation of the actual accounts have occurred.

Accounting principles and general valuation rules.

Determined by the executive board. The accounting principles that have been adopted by the enterprise in the valuation process and procedures are to be established by the executive board of the firm, and entered in the inventory book required by article 7 of the outline law. They must reflect the characteristics and particularities of the enterprise (article 15).

Consistency. In general, the accounting principles used must be identical from one period to another, and they must be applied in a systematic way. Modifications are allowed if disclosed in footnotes (article 17).

As to depreciations and provisions, they should be recorded consistently (in accordance with article 15) and not be dependent upon the results of the accounting period (article 19).

Conservatism. The valuation, depreciation, reduction in value (*waardeverminderingen — réductions de valeur — devaluations*), provision for risks and charges, and other provisions must meet the requirements (standards) of conservatism and prudence, sincerity (truth), and good faith (article 19). Moreover, all foreseeable risks, possible losses, and devaluations (reductions in value) that have occurred during the accounting period or in prior periods should be taken into account, even if these events only became known after the balance sheet date, but before the approval of the accounts by the executive board and the general meeting of shareholders (article 19).

Accrual or matching concept. The royal decree of October 8, 1976, provides also, in article 19, for application of the matching concept. Therefore, costs must be reported as expenses (charges) in the same period as the corresponding revenues, irrespective of the collection date, except for those revenues the collection of which is uncertain.

Item-by-item valuation principle. All assets and liabilities of the enterprise must be valued separately on an individual basis (article 18). Depreciation and revaluations should relate to the specific assets, except for those with identical legal or technical characteristics, where an overall valuation can be applied. Provisions, on the other hand, are to be individualized according to the nature of the risks and charges involved (article 18).

Cost basis of valuation. The cost concept, referred to in article 20 and subsequent articles, implies that the assets of the enterprise are valued and recorded at historical cost, defined either as acquisition price (*aanschaffingswaarde — prix d'acquisition* — article 21), as manufacturing cost (*vervaardigingsprijs — prix de revient des fabrications* — article 22) or as contribution price (*inbrengprijs — prix d'apport* — article 23).

The royal decree identifies four departures from this basic cost concept:

1. In exceptional cases, as stated in article 16, where the application of the general accounting principles would not comply with the requirements of article 3 regarding clarity of the accounts;
2. Where the lower-of-cost-or-market rule for valuation purposes applies (article 27);
3. In the case of certain and permanent surplus values, fixed assets, intangible assets, and investments (fixed financial assets) can be revalued and recorded on a "revaluation surplus" account (liabilities) (article 34); and

4. When replacement values are used for recording tangible fixed assets and inventories (article 35). In this case, the differences between historical cost and replacement cost data must be disclosed and recorded on the "revaluation surplus" account. Furthermore, no deferred depreciation (*inhaalafschrijvingen*) is allowed, nor are the replacement cost data acceptable for fiscal purposes to the Belgian tax authorities.

Going-concern concept. The cost concept of valuation is also closely related to the going-concern concept that assumes the continuity of the business operations for the foreseeable future. This implies that assets must be valued and recorded at cost (less depreciation), not at liquidation values (article 20).

Special valuation rules.

Inventory valuation. The royal decree provides for the use of the following inventory valuation principles: (1) item-by-item valuation, the price of each item being identified individually; (2) weighted average price; (3) FIFO; (4) LIFO; (5) replacement cost; (6) lower of cost or market; and (7) at a fixed amount. This latter principle is exceptional and applies only to small tools, raw materials, and supplies, while being constantly renewed and immaterial in amount (compared to the balance sheet total). These items can be recorded at a fixed amount, thus expensing new purchases (article 32).

Capitalization of interest charges and lease contracts. In comparison to the Fourth Directive, the royal decree of October 8, 1976, provides for the optional capitalization of interest charges on borrowed capital for financing and construction of fixed assets (article 24). In this case, these interest charges should clearly be deducted from the financial results of the entity. According to article 26, leasing contracts and similar agreements should be capitalized.

Special depreciation rules. In excess of accelerated depreciation, supplementary depreciation is allowed for fixed and intangible assets with limited use, in the case of technical obsolescence or where technological or economic circumstances reduce the useful value to the enterprise (economic value) below the book value (article 28 § 2).

Fixed and intangible assets whose expected life is not limited in time should only be depreciated when a permanent reduction in value or depreciation occur (article 28 § 3). The same principle applies to financial investments (article 29 § 2), accounts receivable, and fixed income securities (*vastrentende effekten — titres à revenu fixe*) recorded as investments (article 29 § 2).

The value of intangible assets not acquired from third parties should not exceed a prudent estimate of the useful value (*gebruikswaarde — valeur d'utilisation — value in use*) or the future earning capacity for the enterprise (article 25).

Fixed assets not in use can be exceptionally depreciated to reduce their value to their expected realizable value (article 30).

Work in process can be depreciated if the manufacturing cost, increased by the expected amount of expenses to be incurred before completion, exceeds its net realizable value at balance sheet date or its contract price (article 31).

Form and content of the balance sheet and profit and loss account to be deposited or published. The annual accounts must be presented in accordance with the prescribed format (article 7) and are subdivided into headings (roman numerals or capital letters) and subheadings (arabic numerals). The profit and loss statement can be presented either in account form (double sided) or in list (columnar) form. The annual accounts must be filed with the registrar of the Commercial Court. This does not imply exactly the same kinds of control as customary when filing with the Securities and Exchange Commission. They must include also the "Mechanographical Code Numbers" (article 37) unless the headings (with capital letters only) or the subheadings have been adapted to describe better the company's activities (article 9 § 2). The headings or subheadings can be omitted if they are without purpose (article 38) or irrelevant. They might also be subdivided further if necessary. The National Bank of Belgium provides through its *Balansencentrale — Centrale des Bilans* (a dispatching center for annual accounts) standard forms for annual accounts to be deposited or published. The National Bank of Belgium does not accept, however, any responsibility for material errors in the annual accounts.

All enterprises must comply with these regulations except certain smaller enterprises for which a limited disclosure is permitted. This exception applies only to companies meeting the following criteria, enumerated in article 39: (1) the annual average employment does not exceed 100 employees; (2) a turnover of not more than 100 million BF (exclusive VAT) for the last accounting period; (3) a balance sheet total of less than 50 million BF at balance sheet date; (4) the company should not have called upon public savings; and (5) the enterprise should not be affiliated with a company falling under the requirements of filing or publishing its accounts. The form and content of the balance sheet and the profit and loss account are illustrated in the appendix.

New division of enterprises. Based on the new accounting legislation in Belgium, enterprises can be categorized into four groups:

1. Small self-employed merchants with unlimited liability whose turnover does not exceed 15 million BF (exclusive VAT) are allowed to keep only limited accounting records (three books), and at the same time they benefit from a reduction in penal sanctions.
2. Small enterprises having less than fifty employees, a turnover, exclusive VAT, not exceeding 50 million BF, and a balance sheet total of not more than 25 million BF. They have only to comply with the basic law, and are exempted from the application of the royal decree. They must, however, explain the reasons for not applying the principles laid down in the royal decree, or for applying them differently.
3. Large enterprises must completely observe the law and the royal decree, and must deposit or publish complete annual accounts.
4. Medium-sized enterprises with no more than 100 employees, a turnover not exceeding 100 million BF (exclusive VAT), and a balance sheet total of less than 50 million BF, being a private company (no public savings raised), and not affiliated with a large enterprise, can deposit or publish abridged annual accounts.

As a consequence, three different kinds of annual accounts can be published or filed in Belgium: unabridged or complete annual accounts, abridged annual accounts (based on article 39 of the royal decree), or visiting-card sized *ancien régime* annual accounts.

Further comments. The draft law of 1975, although very general, is an acceptable framework, and compared with the previous existing legal provisions in Belgium, marks an important step forward. Accounting defined as *algebre du Droit et méthode d'observation des sciences économiques,*[15] as Pierre Garnier aptly states, received a satisfying solution in the new accounting legislation in Belgium that can stand a comparison with other European accounting legislations. This does not, however, imply that this accounting legislation is perfect. In fact, there are some important drawbacks and major gaps in the present-day accounting legislation:

1. As mentioned previously, a great many terminological problems between the Dutch and the French versions exist in the texts.
2. The accounting law overemphasizes the importance of the accounts to be kept. Therefore, article 8 of the basic law is outdated

[15] P. Garnier, *La technique comptable approfondie et les comptabilité spéciales* (Paris: Dunod, 1972), p. 483.

and is an anachronism, since almost no provisions were made for computer-based accounting systems.

3. Although in the comments to the royal decree some attention was given to the definition of associated and affiliated companies and majority and minority interests, consolidation principles as such were postponed. For holding companies, however, consolidation is required by the royal decree of November 27, 1977. Those holding companies must disclose in the notes to the accounts the evaluation criteria of investments together with the consolidation policies applied. Consolidation is prescribed when the holding company owns more than 50 percent of the capital stock or the voting rights of a subsidiary or when it controls effectively the board of directors or the management of that subsidiary.

4. The current accounting legislation leaves some other important problems unsolved. Topics that are not covered are inflation accounting, although replacement costing and revaluation of certain assets were accepted; cash-flow statement or statement of financial position (*Staat van Herkomst en Besteding der Middelen*), the requirement of disclosure of such a statement being omitted from the earlier drafts of the royal decree of October 8, 1976; accounting for foreign currency transactions, considered to be too technical to be solved now; accounting for pension funds, although article 36 of the royal decree of October 8, 1976, foresees, in the disclosure of supplementary pension, plans for retirement or death in the notes to the accounts, either if they are covered inside the enterprise or with an outside insurance company; and last but not least, it is worthwhile mentioning the nineteenth century model of the profit and loss statement based on the periodical inventory method of valuation and on the nature of costs, as if the legislator still has to discover modern analytical cost accounting systems.

The royal decree of October 8, 1976, compared with the Fourth Directive. Because this royal decree was primarily based on the first draft of a fourth directive of 1971, as is stated in the Report to the King prefacing the royal decree, some differences between the two have existed. Subsequent changes in the draft leading to the final Fourth Directive were necessarily introduced after the enlargement of the EEC.

The most important differences deal with the following:

1. The companies covered by the Fourth Directive and subject to its application are based on the legal form (status). They consist of

de Naamloze Vennootschap — la Sociètè Anonyme (*Aktiengesellschaft* — Limited Company); *de Personenvennootschap met Beperkte*

Aansprakelijkheid — *la Sociètè de Personnes à Responsabilitè Limitèe* (*Personengesellschaft mit beschränkter Haftung* — Private Limited Company); and *de Commanditaire Vennootschap op Aandelen* — *la Sociètè en Commandite par Actions* (*Kommanditgesellschaft auf Aktien* — Limited Partnership with Shares). The Belgian accounting legislation, however, classifies the enterprises on the basis of their economic and social importance. Because exemptions were granted by article 12 of the basic law, most private limited companies and limited partnerships with shares did not have to follow the royal decree of October 8, 1976. These companies will have to be included in Belgian accounting legislation.

2. Inflation accounting — The Fourth Directive provides for the application of any general method of accounting for inflation. The Belgian accounting law, as already mentioned, has not provided for it as yet except for replacement costs and the revaluation of certain assets.

3. Investments and minority interests — According to the Belgian accounting legislation, any investment is considered to be a participating interest as soon as a company holds 10 percent of the subscribed capital stock, whereas the Fourth Directive determined that level at 20 percent.

4. The presentation of the balance sheet and profit and loss account — Where the Fourth Directive allows for alternative methods of presentation, the Belgian accounting law has not allowed for it until now. As far as the profit and loss account is concerned, the royal decree of October 8, 1976, however, opened the possibility of account form or columnar form presentation. The option to present the profit and loss account on the basis of cost allocation was not considered.

5. Explanatory footnotes to the accounts — To bring the Belgian accounting legislation into agreement with the Fourth Directive, two more disclosures will be required concerning the analysis of turnover and the average number of people employed by the enterprise.

6. Annual report — Belgian accounting legislation did not provide for any prescriptions concerning the form and content of the annual report of directors to accompany the annual accounts. The Fourth Directive does, however, require (article 46) that the annual report (1) should at least give a fair review of the course of the business and of the position of the enterprise, and (2) must include information concerning: important events that occurred after the balance sheet date, expected future development of the enterprise, activities in the field of research and development, and specified information about the acquisition by a company of its own shares.

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APPENDIX.

ASSETS	Code Numbers		BALANCE
I. Formation expenses	0199		XXX
II. Intangible fixed assets	0299		XXX
III. Tangible fixed assets	0399		XXX
A. Land and buildings	0309	XXX	
B. Installations, machines and equipment	0319	XXX	
C. Furniture and rolling stock	0329	XXX	
D. Construction in progress and advance payments	0339	XXX	
E. Fixed assets held on long lease, lease financing or with similar rights	0349	XXX	
F. Other tangible fixed assets	0359	XXX	
IV. Financial fixed assets (investments)	0499		XXX
A. Affiliated companies			
1. Participations (Majority interests)	0401	XXX	
2. Accounts receivable	0402	XXX	
B. Associated companies			
1. Participations (Minority interests)	0411	XXX	
2. Accounts receivable	0412	XXX	
C. Other financial fixed assets			
1. Shares and stock	0421	XXX	
2. Fixed income securities	0422	XXX	
3. Other receivables and guaranty cash deposits	0423	XXX	
V. Accounts receivable at more than one year	0599		XXX
A. Trade debtors	0509	XXX	
B. Other accounts receivable	0519	XXX	
VI. Inventories	0699		XXX
A. Raw materials, consumables and supplies	0609	XXX	
B. Goods in process, work in progress, scrap	0619	XXX	
C. Finished goods	0629	XXX	
D. Trade stock	0639	XXX	
E. Advance payments on purchases of inventories	0649	XXX	
VII. Accounts receivable within the year	0799		XXX
A. Trade debtors	0709	XXX	
B. Other accounts receivable			
1. Unpaid called-up capital	0711	XXX	
2. Other debtors	0712	XXX	
VIII. Short-term investments	0899		XXX
IX. Liquid assets	0999		XXX
X. Transitory accounts	1099		XXX
Total	1999		XXX

SHEET			LIABILITIES
	Code Numbers		
I. Capital	2199		XXX
A. Subscribed capital (issued and paid up)	2109	XXX	
B. Uncalled capital (−)	2119	XXX	
II. Share premium account	2299		XXX
III. Reserves	2399		XXX
A. Legal reserve	2309	XXX	
B. Undistributable reserves	2319	XXX	
C. Reserves exempted from taxation	2329	XXX	
D. Distributable reserves	2339	XXX	
IV. Profit carried over or Loss carried over (−)	2499		XXX
V. Revaluation surpluses	2599		XXX
VI. Capital subsidies (subventions) received	2699		XXX
VII. Provisions for risks and charges	2799		XXX
VIII. Accounts payable at more than one year	2899		XXX
A. Subordinated loans			
1. Convertible	2801	XXX	
2. Non-convertible	2802	XXX	
B. Non-Subordinated debenture loans			
1. Convertible	2811	XXX	
2. Non-convertible	2812	XXX	
C. Pension fund	2829	XXX	
D. Debts resulting from long lease, lease financing and similar debts	2839	XXX	
E. Credit institutions	2849	XXX	
F. Trade creditors	2859	XXX	
G. Advanced payments received	2869	XXX	
H. Other debts	2879	XXX	
IX. Accounts payable within the year	2999		XXX
A. Debts at more than one year falling due within the financial year	2909	XXX	
B. Credit institutions	2919	XXX	
C. Trade creditors	2929	XXX	
D. Debts and liabilities for taxes, social security charges and remunerations	2939	XXX	
E. Advance payments received	2949	XXX	
F. Other loans and guaranty cash deposits received	2959	XXX	
G. Other debts	2969	XXX	
X. Transitory accounts	3099		XXX
Total			XXX

Profit-and-Loss Statement
(Alternative presentation in columnar or vertical form)

	Code Numbers		
I. Operating income (sales and services)	5199		XXX
A. Turnover	5109	XXX	
B. Inventory variations of goods in process, finished goods, scrap and work in progress (increase +, decrease −)	5119	XXX	
C. Internal works on fixed assets (own construction) capitalized	5129	XXX	
D. Other operating income	5139	XXX	
I. Operating expenses (cost of sales and services)	4199		(−)XXX
A. Trade stock, raw materials, consumables and supplies			
1. Purchases	4101	XXX	
2. Inventory variations (increase +, decrease −)	4102	XXX	
B. Miscellaneous goods and services			
1. Purchases and supplies	4111	XXX	
2. Costs carried over (+), costs to be carried over (−)	4112	XXX	
C. Personnel			
1. Remunerations, pensions and other personnel costs	4121	XXX	
2. Pension fund (appropriation +, utilization −)	4122	XXX	
D. Depreciation, reductions in value (amounts written off) and provisions for risks and charges			
1. Depreciation (other than those referred to sub II.A.2)	4131	XXX	
2. Reductions in value on inventories and on accounts receivable within the year	4132	XXX	
3. Provisions for risks and charges (appropriation +, utilization −)	4133	XXX	
E. Other operating expenses	4149	XXX	
I. Operating results	5100		XXX
II. Financial income	5299		XXX
A. Income from financial fixed assets (investments)	5209	XXX	
B. Income from other accounts receivable, short-term investments and liquid assets	5219	XXX	
C. Other financial income	5229	XXX	
II. Financial expenses (charges)	4299		(−)XXX
A. Charges on accounts payable at more than one year			
1. Interest	4201	XXX	

	Code Numbers		
2. Amortization of premiums and issuing expenses	4202	XXX	
3. Interest subsidies received (−)	4203	XXX	
B. Charges from debts at maximum one year	4219	XXX	
C. Other financial charges			
1. Reductions in value on financial fixed assets (investments), on accounts receivable at more than one year, on short-term investments and on liquid assets	4221	XXX	
2. Miscellaneous financial charges	4222	XXX	
II. Financial results	5200		XXX
III. Exceptional income	5399		XXX
A. Reversal of depreciation, reductions in value, provisions for risks and charges and for pensions			
1. Reversal of depreciation	5301	XXX	
2. Reversal of reductions in value	5302	XXX	
3. Reversal of provisions for risks and charges	5303	XXX	
4. Reversal of pension fund	5304	XXX	
B. Surpluses on realization of fixed assets out-of-use	5319	XXX	
C. Other exceptional income	5329	XXX	
III. Exceptional charges	4399		(−)XXX
A. Depreciation, reductions in value, provisions for risks and charges and for pensions			
1. Depreciation	4301	XXX	
2. Reductions in value	4302	XXX	
3. Provisions for risks and charges	4303	XXX	
4. Pension fund	4304	XXX	
B. Losses on realization of fixed assets	4319	XXX	
C. Other exceptional charges	4329	XXX	
D. Transfer to reserves exempted from taxation	4339	XXX	
III. Exceptional results	5300		XXX
IV. A. Reversal of tax provisions and adjustments	5409		XXX
B. Income Tax (tax on profits)	4409		(−)XXX
1. For the financial year	4401	XXX	
2. For previous financial years	4402	XXX	
IV. Taxes	5400		XXX
V. Profit /	4509		XXX
/ Loss for the financial year	5509		XXX

		Code Numbers	
Appropriation of the results			
A.1. Profit/Loss of the financial year	(+:4603;−	:5603)	(+)(−)XXX
2. Profit/Loss carried over (at the beginning of the financial year)	(+:4604;−	:5604)	(+)(−)XXX
B. Transfer from reserves		5619	(+) XXX
B. Transfer to reserves		4619	(−) XXX
C. Profit/Loss to be carried forward	(−:4629;+	:5629)	(−)(+)XXX
D. Reduction of capital or premiums		5639	(+) XXX
D. Remuneration of capital (equity)		4639	(−) XXX
E. Directors or managing directors		4649	(−) XXX
F. Other beneficiaries		4659	(−) XXX

Foreign Language and Accounting Expertise: A Marketable Combination

JANICE CHRISTINE SHIELDS*

In its 1979 report, President Carter's Commission on Foreign Languages and International Studies concluded:

> Our gross national inadequacy in foreign language skills has become a serious and growing liability. It is going to be far more difficult for America to survive and compete in a world where nations are increasingly dependent on one another if we cannot communicate with our neighbors in their own languages and cultural contexts.[1]

The report makes numerous recommendations for improving competence in foreign languages in the United States. These include reinstating foreign language requirements in schools, upgrading the quality of instruction, and developing proficiency tests to monitor progress.[2]

The purpose of this article is to consider specifically the benefits of and potential for combining foreign language and accounting skills. In the first section, the importance of foreign language expertise in business and accounting will be discussed. Next, the present level of training in both foreign languages and accounting will be assessed. Finally, recommendations will be made for improving the foreign language capabilities of students and businesspeople.

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[1] The President's Commission on Foreign Language and International Studies, *Strength through Wisdom: A Critique of U.S. Capability* (Washington, D.C.: U.S. Government Printing Office, 1979), p. 28.

[2] Ibid., pp. 12-27.

FOREIGN LANGUAGE EXPERTISE IN BUSINESS AND ACCOUNTING

Foreign language fluency should be important to businesspeople as a result of the interdependence of world markets which has been created by international trade and investment. Accountants, in particular, should be able to understand more than one language.

Business Needs

U.S. companies currently export to and invest in many countries where the predominant language is not English. In addition, firms from other countries invest in the United States. It would be beneficial to the U.S. people involved if they were fluent in their customer's, competitor's, employer's, or host's language.

In 1979, the seven major markets for U.S. exports were Canada, Japan, the United Kingdom, Mexico, West Germany, the Netherlands, and France.[3] Knowledge of French, Japanese, Spanish, German, and Dutch may enhance these sales. Significant growth in U.S. to Saudi Arabia, Switzerland, Venezuela, South Korea, and Mexico occurred between 1973 and 1979.[4] The increasing importance of these markets should encourage businesspeople to learn the languages of their current or potential customers.

U.S. companies are facing heightened competition from non-U.S. firms in world markets. For example, the U.S. dominance of thirteen major industries has declined.[5] Exhibit 1 indicates that, in 1959, 111 of the 156 firms were U.S. companies. In 1976, only 68 were headquartered in the United States. Major gains have been made by companies from continental European countries and Japan. Further evidence of this trend comes from changes in the nationalities of firms in *Fortune's* list of the fifty largest industrial companies in the world in terms of sales. Between 1974[6] and 1980,[7] the number of U.S. enterprises in the list declined. Additions came from firms headquartered in France, the Netherlands and the United Kingdom, Venezuela, and Brazil. Thus, it is apparent that U.S. companies are competing more

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[3] International Monetary Fund, *Direction of Trade Yearbook 1973-79* (Washington, D.C.: IMF, 1980), pp. 379-80.

[4] Ibid.

[5] Lawrence G. Franko, "Multinationals: The End of U.S. Dominance," *Harvard Business Review* (November-December 1978): 95-96. (The thirteen industries include aerospace, automotive, chemicals, electrical equipment, food products, general machinery, iron and steel, metal products, paper, petroleum, pharmaceuticals, textiles, and commercial banking.)

[6] "The 50 Largest Industrial Companies in the World," *Fortune* (August 1974): 185.

[7] "The 50 Largest Industrial Companies in the World," *Fortune* (11 August 1980): 204.

and more with firms from countries where the major language is not English.

Exhibit 1. Number of Companies among the World's Top Twelve, by Country/Region, in Thirteen Industries in 1959 and 1976

Country/Region	*1959*	*1976*
United States	111	68
United Kingdom	14	15
Continental Europe	25	40
Japan	1	20
Other	5	13

Source: Lawrence G. Franko, "Multinationals: The End of U.S. Dominance," *Harvard Business Review* (November-December 1978): 96.

With the decline in the U.S. dominance of world industries has come increased investment in the United States by foreign firms. The net value of foreigners' assets in U.S. affiliates surged 20 percent during both 1978 and 1979, double the annual growth rate prevailing from 1975-1977.[8] Who manages these investments? Executive recruiters report that the past several years have seen a sharp rise in the number of Japanese, European, and other foreign multinationals looking for U.S. executives to work for them in the United States.[9] Results of one survey indicate that it is important for U.S. managers to learn their foreign employer's language.[10] As part of that study, questionnaires were sent to 105 U.S. subsidiaries of German companies. Of the 70 firms which responded, 62, or 87 percent, indicated that competence in the German language was an important consideration when hiring management personnel and professionals. Financial management, rather than production, marketing, engineering, purchasing, quality control or data processing, was identified by more firms as the functional area in which German competence was important. If these responses are indicative of the attitudes of other foreign investors, further impetus is provided for U.S. businesspeople to understand finance, accounting, and foreign languages.

Continued growth in the foreign direct investment position of U.S. multinational enterprises may also provide jobs for people with both business and foreign language expertise. Between 1970 and 1977, the

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[8] William K. Chung and Gregory G. Fouch, "Foreign Direct Investment in the United States in 1979," *Survey of Current Business* (August 1980): 38.

[9] John Andrew, "More Foreign Firms Seek U.S. Executives for Their U.S. Units, but Snags Can Arise," *Wall Street Journal* (3 February 1981): 56.

[10] Christa Britt et al., "German Firms in the United States: A Survey of Managerial and Professional Opportunities and the Matter of Language Competence," *ADFL Bulletin* (May 1980): 38-40.

U.S. direct investment position in continental Europe rose by 152 percent.[11] During the same years, an increase of 70 percent in Latin America and 180 percent in Japan occurred. Foreign language fluency has been identified as a concern in the selection and preparation of U.S. personnel who manage the foreign operations. In a 1970 study of U.S.-based multinational enterprises, the criteria indicated for selecting executives for overseas assignments included language skills and ability, along with experience in the company, technical competence, area expertise, and others.[12] In an opinion survey of foreign operation managers and overseas managers as to the value of various types of preparation for working overseas, the subjects mentioned most frequently were language, living conditions, economic environment, and customs.[13]

Firms with foreign investments and other companies involved in international business frequently use people with foreign language skills to translate written documents. In a 1977 study of 129 U.S.-based multinational enterprises, several translation requirements were identified.[14] Fifty-six percent of the respondents indicated a need to translate correspondence from a foreign language into English. As shown in exhibit 2, the second greatest need was for translating promotional literature and advertising from English into a foreign language. The study also revealed that translation requirements were met, in general, by company employees whose main job was in a nonlanguage area, thus illustrating the employability of a "language-plus" trained person.[15] Exhibit 3 reflects additional means by which translation needs are met.

When management is unable to find language-plus people to hire, funds for foreign language courses may be provided to employees who have business capabilities only. This can be an expensive alternative, as the results of a small 1980 survey illustrate. The costs of programs of

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[11] U.S. Department of Commerce, *Statistical Abstract of the United States* (Washington, D.C.: U.S. Government Printing Office, 1979), p. 851.

[12] Business International, *Compensating International Executives* (New York: Business International, 1970), p. 2.

[13] John M. Ivancevich, "The American Manager Overseas Representing Large U.S. Industrial Corporations" (D.B.A. thesis, University of Maryland, 1969).

[14] Marianne Inman, "Foreign Languages and the U.S. Multinational Corporation," in *President's Commission on Foreign Language and International Studies: Background Papers and Studies* (Washington, D.C.: U.S. Government Printing Office, 1979), p. 272.

[15] Ibid., p. 273.

Exhibit 2. Translation Requirements

From English into a foreign language	*Percent*	*From a foreign language into English*	*Percent*
Promotional literature, advertising	36.4	Correspondence	56.2
Correspondence	32.6	Financial reports	22.5
Brochures, technical manuals	32.6	Brochures, technical manuals	19.4
Instructional materials	32.6	Instructional materials	17.1
Financial reports	17.1	Journal, professional articles	16.3
Journal, professional articles	11.6	Promotional literature, advertising	14.7
Contracts	9.3	Contracts	9.3

Source: Marianne Inman, "Foreign Languages and the U.S. Multinational Corporation," in *President's Commission on Foreign Language and International Studies: Background Papers and Studies* (Washington, D.C.: U.S. Government Printing Office, 1979), p. 272.

Exhibit 3. Means by Which Translation Requirements Are Met

Translator	*Percentage of companies using translator*
Company employees, main job nonlanguage	40.3
Commercial agency	34.1
Company employees, main job language area	24.0
Private professional translator	15.5
Private individual	10.9
Provided by other party	5.4
School or university	3.1

Source: Marianne Inman, "Foreign Languages and the U.S. Multinational Corporation," in *President's Commission on Foreign Language and International Studies: Background Papers and Studies* (Washington, D.C.: Government Printing Office, 1979), p. 273.

various durations ranged from $1,200 to $7,000 for instruction in a classroom setting, to $3,466 to $5,700 for intensive training.[16]

To summarize, a person with both business and foreign language expertise can improve the operations of a company. If this combination of skills is not available, a firm may choose to finance appropriate training.

Accounting Needs

Foreign language fluency and accounting knowledge can also be combined for effective results. Efforts to harmonize regional and international accounting and auditing standards would be enhanced if participants could understand each other's language and culture. The

[16] "How to Learn a Foreign Language," *Business Week* (29 September 1980): 134.

transnational growth of accounting firms and corporations may allow further use of people with both accounting and language capabilities.

Establishment of international accounting and auditing standards requires first an understanding of the practices in the countries involved. Results of research conducted by local practitioners and academicians provide further insight into current national trends. The true meaning of foreign standards and research reports may be lost when reliance is placed on nonaccountants for word-by-word translations.

Once exposure drafts on regional or international standards have been developed, they must be translated into the various participants' languages for consideration. This time-consuming task significantly slows the harmonization process. For example, the International Federation of Accountants currently allows four months for the translation of proposed auditing guidelines before issuing them as exposure drafts.[17]

With the transnational growth in accounting firms, people who have both foreign language and accounting expertise may be used for more than just translating standards. Ernst and Whinney employs U.S. people in various European countries. According to the firm, a major concern is that the staff speak the local language.[18] The growing importance of international operations is reflected in the fact that Ernst and Whinney expects about 40 percent of total revenue to come from outside of the United States in 1980-1984, compared to 25 percent in 1977.[19]

Other U.S. accounting firms are active internationally, too. In 1976, only 25 percent of Arthur Andersen's fees came from sources outside the United States.[20] By 1980, that figure had risen to 32 percent. In 1945, Coopers & Lybrand had only 239 employees worldwide. By 1979, there were 22,485.[21] Arthur Young currently has offices in 192 cities outside the United States,[22] while Price Waterhouse has some 300

[17] Robert N. Sempier, "The International Federation of Accountants: Operating Procedures and Current Progress," *International Journal of Accounting* (Fall 1980): 25.

[18] "The Explosion in Europe," *E & W People* (Spring 1980): 3-7.

[19] "U.S. Accounting Firms Find European Market Increasingly Attractive," *Wall Street Journal* (22 January 1980): 15.

[20] Arthur Andersen & Co., *The Arthur Andersen Worldwide Organization 1980 Annual Report* (New York: Arthur Andersen & Co., 1980), p. 17.

[21] "International Accounting Firms Consolidate Worldwide," *Multinational Business*, no. 3 (1980): 3.

[22] Arthur Young and Company, *Serving Our Multinational Clients* (New York: Arthur Young & Co., 1979), p. 7.

offices in more than eighty countries and does business in over thirty languages.[23]

Much of the growth in accounting firms has come in response to the increase in foreign investment by U.S. companies. These corporations may also employ people with both foreign language and accounting skills. As indicated in exhibit 2, financial reports must be translated from other languages into English and, somewhat less frequently, from English into other languages. The task is often performed by a company employee whose main job is in a nonlanguage area, for example, an accountant who understands the foreign language.

Survey Results

To assess better the marketability of a person with both foreign language and accounting expertise, letters were sent to ten manufacturing corporations, two banks, and eight accounting firms. The companies and banks were selected from *Forbes'* list of the 150 largest U.S. multinationals.[24] Each has at least 40 percent of its assets located outside the United States. The manufacturing companies each represent a different industry, based on the *Fortune* 500 classification. Seven corporations and three accounting firms responded to the letter. In general, most agreed that a person must combine language skills with some technical expertise in order to be marketable. The following are excerpts from the responses.

...Speaking for our own internal auditing department, we would find it very difficult to manage our function without having a number of people who have communication skills in languages other than English. Our current cadre of auditors includes employees with the ability to communicate in Dutch, German, French, Italian, Spanish, Portuguese, and Japanese. These are the most important languages other than English with which we must cope in performing our internal audit services.... When other languages are required, we normally utilize the services of our public accounting firm to provide one or two local bilinguals to work with our audit team...— *A chemical company's response*

...The combination of skills that you speak of is of particular value to our accounting managers overseas. These skills are also useful to any of our U.S. employees who might be assigned to direct special task forces for a period of time at overseas locations...— *A manufacturer of motor vehicles*

...Without question it is useful for an internationally oriented person to be able to converse in a foreign language. In my opinion, that is of more than social usefulness when it reaches a high level of expertise...— *A respondent in the electronics and appliances industry*

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[23] Price Waterhouse, *One Worldwide Standard of Excellence* (New York: Price Waterhouse, July 1979).
[24] "The 150 Largest U.S. Multinationals," *Forbes* (25 June 1979): 56.

... To make a general statement, the ability to communicate in a language other than English is indeed an asset, especially in (company name) case, if the language is French, Spanish or German. In the past, a language major with knowledge of international accounting would have been sent abroad to work in the (company name) international units. However, the taxation of the U.S. expatriate's salary and allowances by the IRS and the resulting tax equalization has increased the cost of sending an American abroad to such an extent that such transfers to international units have been reduced to a mere trickle.... There is some agitation in Congress for a change in taxes on U.S. personnel working abroad. If this change is made, it is possible that (company name) personnel staffing approach might change ... — *A manufacturer of food products*

... Due to (company name) extensive international operations, we always consider linguistic abilities of any candidates quite favorably ... — *A company in the soap and cosmetics industry*

A representative of a petroleum firm indicated in a telephone reply that they hire U.S. personnel with language abilities to conduct internal audits of operations in the Far East and South America.

... We select personnel for overseas assignments based on their over-all business knowledge, which includes accounting as well as other financial aspects, and find that they can learn the language either while on the assignment or prior to taking the assignment ... — *An executive in a rubber and plastic products company*

The U.S. multinational corporations sampled place some value on a person with both foreign language and accounting expertise. One firm, however, emphasized language knowledge in the preparation rather than selection of expatriate personnel.

While neither of the banks responded to the letter, Citibank has indicated that foreign language skills are important. In a recent *Business Week* article, Hoyle C. Jones, a vice president in charge of personnel in Western Europe, is quoted as saying that Citibank does not let foreign-bound executives out of the country unless they are at least "socially conversant" with the host language.[25]

The following three responses were received from accounting firms:

... working on an international engagement with knowledge of the local language and international accounting can only enhance a person's career.... Although the English language has been traditionally known as the "language of business," the recent surge of nationalism has brought the issue of communication in the local language to prominence....

To some degree we would prefer to hire an individual who has majored in accounting and has a knowledge of a foreign language ....

... we require all of our Audit and Tax department candidates to be CPAs. This requires following a prescribed academic curriculum with a concentration in Accounting ....

[25] *Business Week*, p. 132.

Though Ernst and Whinney did not respond to the letter, the firm is concerned that the staff speaks the local language, as indicated previously.

The accounting firms, like the corporations, recognize the importance of language capabilities in addition to accounting skills. The firms tend to place more emphasis on an in-depth knowledge of accounting, so that their employees can pass the CPA exam.

To summarize, many reasons for hiring a person with both foreign language fluency and business and accounting expertise have been illustrated. Responses from corporations and CPA firms support these conclusions.

FOREIGN LANGUAGE AND ACCOUNTING EDUCATION

Though the marketability of a person with both foreign language and accounting skills is evident, the extent of foreign language training in the United States has declined in recent years. According to the study conducted by the President's Commission, only 15 percent of U.S. high school students now study a foreign language, down from 24 percent in 1965. Only 8 percent of U.S. colleges and universities now require a foreign language for admission, down from 34 percent in 1966.[26] Since 1963, there has been a drop of 44 percent in college enrollment in foreign language programs.[27]

When compared to other countries, the U.S. trends are even more staggering. As part of a recent survey, nations which have embassies in Washington were contacted to determine the extent of their foreign language programs.[28] Seventy-four nations responded and among them, none could compare with the United States in the neglect of foreign languages. In Brazil, for example, English is taught in all three years of secondary school, and university entrance examinations require the knowledge of foreign languages. Students in France are required to take one foreign language from sixth grade through secondary school graduation. A second foreign language is required beginning in the ninth grade. For entrance into college, students must pass at least one foreign language examination. In South Korea, English is required in grades seven through twelve. Another language is required in the tenth through twelfth grades. At the university level, English is required all four years. More than 80 percent of Japanese students take foreign

[26] *Strength through Wisdom,* p. 7.
[27] Paul Simon, "The U.S. Crisis in Foreign Language," *Annals of the American Academy of Political and Social Science* (May 1980): 32.
[28] Ibid., pp. 35-38.

languages starting at the age of twelve. Two foreign languages are required for university graduation.

Survey Results

To assess the foreign language training of U.S. accounting students and the accounting education of foreign language majors, questionnaires were sent to international accounting teachers or accounting department chairpersons at twelve universities. In general, schools were selected if an undergraduate or graduate-level international accounting course had been taught there, according to both the 1974[29] and 1980[30] Academy of International Business curriculum surveys. It was believed that, because these schools had indicated a commitment to offering courses in international accounting, they would also be the most likely ones to encourage combined accounting and foreign language education. However, the results show that these universities are not providing graduates with both foreign language and accounting expertise.

In none of the twelve universities were undergraduate or graduate accounting majors required to take courses in or otherwise prove fluency in a foreign language. Most respondents indicated that less than 20 percent of the undergraduate or graduate accounting majors could communicate in a foreign language. The statistics improve somewhat for graduate international accounting students, though in all but one university less than 50 percent of the undergraduate or graduate international accounting students are fluent in a foreign language. These results appear to be perpetuated by the fact that less than half of the respondents indicated that they encourage undergraduate or graduate accounting majors to learn at least one foreign language.

In six of the universities, foreign language majors take undergraduate accounting courses as electives; language majors rarely take graduate-level accounting courses as electives. Most respondents indicated that foreign language majors do not take the undergraduate or graduate-level international accounting course. In some cases, this may be because language majors often do not have the necessary accounting prerequisites for the international accounting course.

Schools vary significantly in terms of the number of prerequisites needed for the undergraduate and graduate-level international accounting courses. Of the six universities which offer the course at the

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[29] John D. Daniels and Lee H. Radebaugh, eds., *International Business Curriculum Survey* (Academy of International Business, 1974).

[30] Robert Grosse and Gerald W. Perritt, eds., *International Business Curricula: A Global Survey* (Academy of International Business, 1980).

undergraduate level, one requires only a business background as prior preparation for the class, two require a course in elementary accounting, two require courses in intermediate accounting, and one requires ten credits in accounting. The prerequisites are even more diverse for the graduate-level international accounting course. Exhibit 4 indicates that the requirements range from no prior preparation to a degree in accounting.

Exhibit 4. Prerequisite Courses for the Graduate International Accounting Course

Prerequisite courses	*Number of respondents*
None; instructor's permission	1
Business background	1
Elementary accounting	2
Basic accounting	1
Financial accounting	1
Introductory financial/managerial accounting; instructor's permission	1
Ten credits of accounting courses	1
Introductory and intermediate accounting; cost and control	1
Degree in accounting (36 hours) or equivalent in accelerated accounting courses	1
Not applicable	2

Very few respondents indicated that their universities have an established undergraduate or graduate foreign language/business program, for example, a program in which foreign language majors take the business core courses. Of the two with undergraduate programs, one requires nine credit hours in accounting and the other, three hours. In two of the three universities with graduate language/business programs, participating students are required to take one accounting course; in the third university, two accounting courses are required.

It is clear from the results of this survey that there is little informal or formal contact between the accounting and foreign language departments in these schools. This is unfortunate, given the needs previously identified in the business and accounting world.

RECOMMENDATIONS

Based on the preceding discussion, there is an obvious need to develop programs which provide people with foreign language, business, and accounting expertise. Companies, as well as colleges and universities, should become active participants in this process.

Colleges and Universities

At the university level, accounting majors, especially those with interests in international accounting, should be encouraged to become fluent in at least one foreign language. Foreign language majors, especially those who plan to work in business, should take business core courses, including accounting. Depending upon the structure of the particular undergraduate or graduate program, the student may have to take extra courses each term or extra terms or coursework. An alternative would be to provide study centers where students can work independently to maintain foreign language fluency previously acquired.

Universities should establish undergraduate language/business programs. For example, the Department of French at The Pennsylvania State University currently offers a business option for its undergraduate majors. Students take thirty-six credits in advanced French courses, including business writing in French, twenty-one credits in business administration, including financial accounting, corporate finance, international business operations, international business and national policies, management, marketing, and business statistics, and twelve credits in related areas, including microeconomic and macroeconomic analysis, international economics, and business writing. One major U.S. multinational firm specifically seeks students from this program, rather than from the accounting department, for its international internal auditing staff.

Another example of an interdisciplinary major is the Multi-National Corporate Studies Program at Upsala College.[31] The core of the major is the business curriculum. Courses are required in domestic and international business and management, economic systems, money and banking, business finance, and marketing. The students also select a number of supporting courses in history, political science, and anthropology. The required foreign language core consists of four semester courses with a prerequisite of third-year proficiency. The first two semesters provide a description and analysis of the broad social and economic structures of a target area, while familiarizing the student with a large vocabulary in the relevant language. The aim of the third and fourth semester courses is to provide more advanced training in linguistic performance by drawing on the vocabulary and language

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[31] Glenn Halvorson, James Moniz, and Kurt C. Nathan, "Foreign Languages and Corporate Study: A Successful Marriage," *ADFL Bulletin* (March 1978): 24-25.

skills developed in the contemporary culture courses. The program culminates in two internships, one domestic and one foreign.

The multidisciplinary programs should also be offered at the graduate level. Penn State has recently begun to offer concurrent graduate degree programs in French and business administration. A student may combine a Master of Arts in French Studies with an MBA or with a Master of Science in Business Administration with specialization in a functional business area. In the two concurrent degree programs, a final paper dealing with a business subject must be written in both French and English.

The Master of International Business Studies degree program at the University of South Carolina is another example of a successful combination of business and foreign language courses. The internationalized business curriculum provides both fundamental business training and business skills needed in an international business career. During the first summer of the program, students take a three-month accelerated and intensive foreign language course. During the next fall and spring semesters, additional skill improvement courses are required, with an emphasis on the special vocabulary of business in the language. In July of the second year, students leave the United States for four to six weeks of special on-site language instruction. Finally, the program includes a six-month intership overseas.

A course in international accounting should be available to students in both the informal and formal interdisciplinary programs. Serious consideration should be given to the appropriate prerequisites; a basic financial accounting course may be adequate preparation.

Businesses

Business firms should make university teachers and administrators aware of the need for students with both foreign language and business education. Companies should, for example, give more priority to foreign language training in recruiting new personnel.[32]

Firms may also provide in-house language training or fund outside coursework taken by their employees. Some evidence suggests that this trend has begun. The Business Council for International Understanding Institute, which specializes in cross-cultural indoctrination for families slated for overseas posts, reports that corporate requests for intensive language training have risen in two years to 24 percent of families processed from 4 percent.[33]

[32] *Strength through Wisdom*, p. 131.
[33] *Business Week*, p. 132.

Companies in the United Kingdom are also recognizing that "English is not enough."[34] Some large companies there have used language training for some time, often bringing in teachers from top language schools to give in-company courses. One firm offers courses at all levels, from technicians to top management. Another, in addition to using courses offered by language schools, has a tutor in the office who does translations and teaches employees individually.

This paper has presented several recommendations for improving the foreign language capabilities of U.S. businesspeople. The major alternatives include developing interdisciplinary university programs and funding courses for employees.

SUMMARY AND CONCLUSIONS

In today's business and accounting world, fluency in more than one language is definitely a valuable asset. To reverse the downward trend in foreign language capability in the United States, university business majors, including accounting majors, should be encouraged to study at least one foreign language. Foreign language majors hoping to pursue careers in corporations and accounting firms should take business and accounting courses. Companies should recruit these students and also support language training for their employees.

[34] Leslie Kenyon, "Why English is not Enough," *Industrial Management* (November 1973): 28-29.

Translation Problems of International Accounting Standards

MOHAMED ELMUTASSIM HUSSEIN*

The International Accounting Standards Committee (IASC) has been issuing standards since late 1974. It is an appropriate time to review the results of its work to see how successfully it has accomplished its charge of formulating standards to be observed in the presentation of audited financial statements and to promote their worldwide acceptance. But before such a review can be undertaken, there is a need to ensure that IASC's standards are communicated uniformly to accountants in all its member countries. Like all other cross-cultural endeavors, international accounting standards are affected by the problem of translation. The IASC solved the problem by adopting English as its official language and left to its member institutes the task of translating its documents into their own languages. This paper argues that this arrangement does not ensure that the translation corresponds to the original English. To ensure the quality of translation, IASC should exercise some control, such as centralizing the process of translation to all languages or setting uniform procedures to be followed by all its members. The paper proposes using the back-translation method, which has proved successful in other areas of cross-cultural work.

THE TRANSLATION PROBLEM

The problems of translation have plagued many international activities. Terpstra observed that every time a language barrier must be

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crossed, there is a potential communication problem.[1] Hilderbrandt reported that in all the companies he visited, there exists a linguistic barrier between the German subsidiaries and the headquarters of their American parent companies. He also noted that the preparation of a report by a German subsidiary can become a kaleidoscope of translation, retranslation, restatements, rewriting, and frustration. Even when professional translators from outside the company rewrote the German into English, German middle managers were unable to verify whether the report captured the substantive intent or included editorial alterations.[2]

Chesebrough reported that since the spoken Japanese language developed before the current commercial and technical concepts, the expression of technical or commercial thoughts is often convoluted. Also, it is not unusual in a conversation or in written text that is entirely in Japanese to have English words appear.[3] According to Masso, even "Japanized" English words may have acquired different meanings. Masso gives as an example President Nixon's statement: "China and the United States share many parallel interests and can do much together to enrich the lives of our peoples." In this case, it can be understood from the context that *parallel* meant "with like directions or tendency." However, according to Masso, the word *parallel,* which is now part of the Japanese vocabulary, seems to emphasize the impossibility of the convergence of the two lines, hence, implying either opposition or confrontation.[4]

Triandis gave another example of a word that has different meanings in different languages; the English word *sympathy* is most strongly related to the ideas of compassion for another's suffering, pity, and commiseration. The standard Britannica dictionary also mentions "the quality of being affected by the state of another," and also the ideas of "congeniality" and "accord." In the Latin languages, when a person is sympatique, simpatico, or sympathicas, the strongest connotation is that he is nice, a connotation which is not explicit in English.[5]

[1] Vern Terpstra, *The Cultural Environment of International Business* (Cleveland: South-Western Publishing Company, 1978).

[2] H. W. Hilderbrandt, "Communication Barriers between German Subsidiaries and Parent American Companies," *Michigan Business Review* (July 1973): 6-14.

[3] Harry E. Chesebrough, "American Management Expertise: Exportable?" *International Journal of Accounting* (Fall 1975): 146-59.

[4] Kunihiro Masso, "Indigenous Barriers to Communication," *Japan Interpreter,* (Winter 1973): 96-108.

[5] H. C. Triandis, "The Interpersonal Relations in International Organizations," *Organizational Behavior and Human Performance* (1967): 26-55.

Burnett noted that although the European Economic Community directive on company law is not particularly complicated, several uncertainties arose in translating the original from German to English.[6] Beekhuisen and Frishkoff had difficulty translating the Dutch word *vermogen* to English, noting that it could have any of the following meanings: total assets, total equities, or net worth.[7] Previts argued, "It will not be easy to translate complex accounting notions into other tongues, particularly when the accounting concepts are complex or incomplete and have not been fully agreed upon in their native usage."[8]

Because of the many meanings a word or phrase can have in a language, sometimes the translation of the intended meaning is more difficult than the mere translation of words. Pei gave an illustration of such difficulty: translating the Spanish term "toros bravos" into "brave bulls" is oversimplification. The primary idea in Spanish is that they are mean, ornery critters. This is proved by another Spanish expression "ponerse bravo," which does not mean "to get brave," but "to get mad to the point of being dangerous."[9]

Leaving the translation of standards to member institutes without any specific procedures, simply because these institutes have members who have a high command of the English language, is not a safeguard against poor translation. Osgood et al. discovered that translation by their colleagues in other countries tends to suffer from one of two tendencies. Their colleagues have erred either toward the direction of English terms with which they are already familiar or have "leaned over backward" to avoid this bias and in effect decreased apparent similarities.[10]

Finally, one might even question which English language is adopted as the official language by IASC. Arensberg and Niehoff argued that even though England, the United States, and Ireland speak the English language, in fact, there are three different languages.[11] Exhibit

[6] R. Andrew Burnett, "The Harmonization of Accounting Principles in the Member Countries of the European Economic Community," *International Journal of Accounting* (Fall 1975): 23-30.

[7] Theo Beekhuisen and Paul Frishkoff, "A Comparison of the New Dutch Accounting Act with Generally Accepted Accounting Standards," *International Journal of Accounting* (Spring 1975): 13-22.

[8] Gary J. Previts, "On the Subject of Methodology and Models for International Accounting," *International Journal of Accounting* (Spring 1975): 5.

[9] Mario Pei, *Language Today: A Survey of Current Linguistic Thought* (New York: Funk and Wagnal, 1967).

[10] Charles E. Osgood, William H. May, and Murray S. Miron, *Cross-Cultural Universals of Affective Meaning* (Urbana: University of Illinois Press, 1975).

[11] Conrad Arensberg and Arthur Niehoff, *Introducing Social Change; A Manual for Americans Overseas* (Chicago: Aldine Publishing, 1964).

1 lists some differences in accounting terms used in consolidated financial statements in England and the United States.

Exhibit 1. Comparison of Accounting Terms Used in Consolidated Statements in the United States and the United Kingdom

United States	*United Kingdom*
1. Parent company	Holding company
2. Publicly held corporation	Public company
3. No corresponding term	Private company
4. Income statement	Profit-and-loss statement
5. Long-term liability and stockholders' equity	Capital employed
6. Total assets — current liabilities	Capital employment or net asset employed
7. Consolidated financial statements	Group accounts
8. Affiliated companies	Associated companies
9. Inventory	Stock
10. Total sales	Turnover

METHODS USED TO IMPROVE QUALITY OF TRANSLATION

Social scientists engaged in cross-cultural research have developed several techniques to solve the translation problem. Brislin identified the following techniques:

1. Back-translation, where two bilinguals are used, one translating from the source to the target language, and the second blindly translating back from the target to the source.
2. Bilingual technique, where bilinguals take a test in both languages. Items yielding discrepant responses can be easily identified.
3. Committee approach, where a group of bilinguals translates from the source to the target language. The mistakes of one member can be caught by other committee members.
4. Pretest procedures, where after a translation is completed it is field-tested to insure that future subjects will comprehend all questions.[12]

Back-translation is the most widely used because it lends itself to statistical tests. Brislin developed and tested a five-criteria equivalency examination for the back-translation procedure:

1. Monolingual raters examine the original and back-translation forms of a passage, and list errors that they feel would lead to differences in meaning of the two forms.

[12] Richard W. Brislin, "Back-Translation for Cross Cultural Research," *Journal of Cross-Cultural Psychology* (September 1970): 187.

2. Bilingual raters look at the original and target versions and list meaning errors as in criterion one. These bilingual meaning errors can be compared with those meaning errors found by monolingual judges in criterion one.
3. Subjects should be able to answer questions about target language and back-translated passages. A questionnaire based on the content of the passage is written and administered to subjects who have seen only the target or back-translated version. If differences emerge, then it can be determined whether the differences were caused by the translation or back-translation.
4. If the passage in English asks for a performance of some sort, the subject may be requested to perform a task with the target version as the instructions. If he can complete the task, then the original and target versions are undoubtedly equivalent.
5. An actual original-language questionnaire and its target-language translation are given to four groups of bilingual subjects equated by randomization. One group sees the original language version of the questionnaire; a second group sees the target-language version; a third sees the first-half original, second-half target; the fourth sees the first-half target, second-half original. If the versions are equal, then item frequencies should be the same as should the total score for the entire questionnaire across groups.[13]

Back-translation is often used with a process called decentering. In decentering, both the source and target languages are equally important. If back-translation revealed differences between the source and target versions, the researcher should be equally willing to revise the source version if that will lead to a higher equivalence between the two versions.

USE OF BACK-TRANSLATION IN INTERNATIONAL ACCOUNTING STANDARDS

The use of the back-translation procedure, either centrally by IASC or by its member institutes, can provide a means of ensuring that international standards are communicated properly in different languages. The first two of Brislin's five-criteria procedures can be used to test the quality of translation from English to other languages. The last three criteria are not necessary because they were specifically designed for use by researchers who are using questionnaires or doing anthropological studies where physical movement is involved.

[13] Ibid., p. 189.

The two criteria that can be used by the IASC to test the quality of translation of its standards are the following:

1. Monolingual raters examine the original and back-translation forms of a passage, and list errors that they feel would lead to differences in meaning between the two forms.
2. Bilingual raters look at the original and target versions and list meaning errors as in criterion one. These bilingual meaning errors can be compared with those meaning errors found by monolingual judges in criterion one.

A simple illustrative example of how the two criteria can be used is undertaken. In the introduction to Standard No. 3 on Consolidated Financial Statements, IASC gave the definition of twelve phrases. A copy of the Spanish translation of the standard was obtained from the Mexican Institute. A Spanish-speaking bilingual teaching in the School of Business Administration in an American university blindly back-translated the twelve phrases from Spanish to English. Ten monolingual professors of accounting were asked individually to compare the original version with the back-translation and identify phrases where there are differences in meaning. To determine the reliability of the raters' judgments, a composite reliability measure was used.[14] As can be seen in exhibit 2, a high inter-rater reliability of 96 percent was found. An inspection of the data in exhibit 2 showed that an error is identified by at least two raters.

A bilingual who teaches accounting in both English and Spanish in the United States and Latin America compared the original English version and the Spanish translation and rated them (criterion two). In comparing the original English version and the Spanish version, the criterion-two rater was able to pick an instance where two different Spanish phrases were used to translate the same English phrase. In the text, voting power was translated as "el derecho de voto" while in a related footnote it was translated as "la facultad de voto."

Since only one criterion-two rater was available, no statistical analysis of intercorrelation between criterion one and two was possible. But an inspection of exhibit 3 shows several phrases that were identified by criterion-two rater as poor translation were also identified by a large percentage of criterion-one raters.

The same illustrative example was repeated using the French version. A copy of the French translation was obtained. An exchange

[14] Ole R. Holsti, *Content Analysis for the Social Sciences and Humanities* (Reading, Mass.: Addison Wesley, 1969), p. 137.

Exhibit 2. Criterion-One Ratings

Raters	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*9*	*10*	*Total* #	*Total* %
Phrases												
Investor											0	0
Investee		X				X				X	3	30
Subsidiary											0	0
Parent company											0	0
Consolidated financial statements				X	X			X		X	4	40
Control		X				X				X	3	30
Group											0	0
Minority interest									X	X	2	20
Equity capital	X	X	X	X			X	X	X	X	8	80
An associated company			X			X	X	X	X	X	6	60
Significant influence			X	X	X			X	X	X	6	60
The equity method	X	X	X	X	X	X		X	X	X	9	90
Total	2	4	4	4	3	4	2	5	5	8		

X = error in meaning identified.
Composite reliability = 96 percent.

Exhibit 3. Comparison of Criterion-One and -Two Raters

Phrases	*% of Criterion-one raters*	*Criterion-two rater*
Investor	0	0
Investee	30	0
Subsidiary	0	X
Parent company	0	0
Consolidated financial statements	40	0
Control	30	X
Group	0	0
Minority interest	20	0
Equity capital	80	X
An associated company	60	X
Significant influence	60	X
The equity method	90	X

graduate business student from France who has a good command of English back-translated the French version into English without seeing the English version. Eight of the monolingual raters who took part in the earlier example compared the retranslated version and the original version. The reliability of the raters is 93 percent (see exhibit 4).

A Frenchman with a Ph.D. from an American university who teaches marketing at an American university compared the original English version and the French translation and rated them (criterion

Exhibit 4. Criterion-One Ratings Back-Translation from French

									Total	
Raters	*1*	*2*	*3*	*4*	*5*	*6*	*7*	*8*	*#*	*%*
Phrases										
Investor			X			X			2	25
Investee			X		X	X		X	4	50
Subsidiary				X	X	X			3	37.5
Parent company				X		X			2	25
Consolidated financial statements	X	X			X		X		4	50
Control									0	0
Group				X					1	12.5
Minority interest				X					1	12.5
Equity capital						X			1	12.5
An associated company	X	X	X	X			X	X	6	75
Significant influence	X	X	X			X	X	X	6	75
The equity method	X	X	X			X	X		5	62.5
Total	4	4	5	5	3	7	4	3		

X = error in meaning identified.
Composite reliability = 93 percent.

two). Both criteria-two rater and the translator expressed their objection to the use of the term "equivalence" to mean "equity." The French dictionary defines *equivalent:* "qui a la meme valew, le meme sens," that is, of equal value or similar, which corresponds to the English meaning of the word equivalent. Almost two-thirds of criteria-one monolingual raters seem to agree with this objection. These objections would have caused the French Institute to investigate whether there is another word that better conveys the meaning of the word *equity* than the word *equivalence.* One French student suggested using the word *equity* itself.

DISCUSSION AND CONCLUSIONS

This simple illustration indicates that back-translation can be used to evaluate the quality of the translation of international accounting standards. Back-translation and decentering can also be used to evaluate the quality of the original English version. Whenever difficulty is met in translation and retranslation, the original English version can be revised. For example, some of the raters comparing the English original with the retranslation from Spanish pointed to the following phrase as being more ambiguous in the original than in the retranslation. The same sentiment was expressed concerning the retranslation from French.

Original English: "Equity capital is the issued share capital of a company which is neither limited nor preferred in its participation in distributions of the profits of a company or in the ultimate distribution of its assets."
Retranslation from Spanish: "Common stock is the capital of common stock issued by a company which has neither restriction nor preference in the distribution of profits of a company nor in the final distribution of assets."
Retranslation from French: "Ordinary capital is composed of the stocks issued by a company, whose quota in the distribution of the income or in liquidation is neither restricted nor privileged."

Another translation-quality measure procedure that can be used is to compare back-translations from several languages to see if there are common errors or not. Such a procedure can test the quality and reliability of translation across several languages.

Finally, as a first step, IASC need not centralize the translation but direct its member institutes to follow the back-translation procedure which would insure the quality of translation without additional direct costs to IASC.

Recent Business and Accounting Developments in China

TSUN TSIEN HSU*

I was an Illinois-educated man and graduated from this university in 1946. How time flies! Thirty-four years have passed since I left this campus. I am naturally very pleased to return here and meet all of you, respected professors, visiting scholars, students, and friends.

All of you here are specialists in accountancy, but I have only limited knowledge in this area. I will mention some of the Chinese economic problems, particularly a bit more of our national practice of business management, and, of course, accountancy is a most important component of business management.

As you know, our economic system is quite different from yours. At the present time, our main task is to mobilize the people of the entire nation to turn China into a powerful country with modern agriculture, modern industry, modern national defense, and modern science and technology. Every type of work we are doing now is designed to serve these four modernization efforts. However, our scientific and technological level is rather low. The methods of management are even more backward. Compared with the advanced level in some other countries of the world, our technical level, and particularly the managerial methods of our existing enterprises, are behind the times. Unquestionably in order to modernize our economy, it is necessary to modernize our management greatly.

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How is Chinese management to keep pace with this modernization? It is the most important problem in China today. That is, in order to bring about this modernization, China will need to reform its methods of management and the structure of its management. It is a fact in our country that owing to poor management, some newly important technologies and equipment are operating below capacity. In some industrial enterprises, the equipment and other facilities compare quite favorably with those of some other countries, but their efficiency is much too low. Due to poor management and low efficiency, the productive capacity of our industrial and agricultural enterprises has not yet been fully brought into play.

Why? From my point of view, there are some historical reasons. First, the present condition was influenced by the habit of the use of small-scale production units which had been formed over long years by our feudal society. Until now, the habit in the use of small production still exercises a strong influence on the entire Chinese economic structure. The majority of managerial members have not been able to understand how to manage large enterprises. They attempt to manage large enterprises merely by administrative orders or even by the small producers' and feudal bureaucratic methods. This is one of our big problems; it is very important and necessary for us to raise our management level as a whole.

Second, in the early years we learned from Russian (Soviet) experiences and copied mechanically. We managed the enterprises according to the "Will of the Superiors." Much time and energy were wasted by following a zigzag path. So, theoretically, there is a long-standing view in our political economics which holds that since a socialist economy is a planned economy, it is incompatible with the market: interpreting a socialist-planned economy is a simple and absolute negation of a free market. In this way, things produced according to the planned target are usually not what are needed, frequently causing an overstocking of products; on the other hand, what is actually needed in society may be in short supply. Furthermore, most of the products produced by the Chinese state enterprises are purchased and marketed exclusively by the government. Because material interests had no connection with how an enterprise was managed, cost accounting became a formality and could not be used to achieve greater production. Financially, all revenues of the various localities are remitted to the central authorities; the individual enterprises have little power to deal with financial matters and are required to ask the central authorities for appropriations.

Under these circumstances, it was impossible for an enterprise to practice cost accounting and financial management, so production had to be performed with funds, manpower (labor), and materials provided by the various government departments. Naturally, the enterprise lacked a sustained motivation to lower production costs, to improve the quality of products, and to increase their variety so to meet more adequately the consumer's needs. Waste in various fields remained a long-standing problem.

Therefore, in order to handle correctly the relationship of the material interests in different sectors of our economy and to mobilize all positive factors to hasten the construction, it is necessary to give full play to the role of the market mechanism in our economy and reform our management structure. To this end, we are now conducting thorough investigations and making every effort to solve in theory and practice the problem of combining the regulation of both planning forces and the market forces in our economy. Our government is working on a series of policies and organizational measures to reform our management. We must change the method of managing the economy and the overconcentration of power in management by purely administrative means.

However, we are short of specialists in management. We must take all appropriate measures to train managers. It is a major problem to raise our managers' managerial ability. In the meantime, many important theoretical and practical questions urgently need to be studied and solved. To this end, the cadres in various government economic departments are now being rotated for training. The State Economic Commission has established some special classes for the study of the management of enterprises. Recently we have been training in groups the directors of key factories and mines and the leading members of the government ministries in charge of enterprise management. All these trainees attend lectures by specialists and scholars and learn from the advanced experience of foreign and domestic enterprises in modern management. They discuss problems relating to management and make suggestions for improvement. Meanwhile, we have been inviting experts and professors from abroad to lecture, such as Professors Klein and Herbert H. Simon. Many American professors have been very friendly and helped us to start special classes in business management at Talian and at other places for training our managers and university faculty members. Our universities, colleges, and institutes have increased the number of departments or specialties of management and also run short-term training classes to help train managers

and accountants, and departmental representatives of factories, mines, and government. The curricula of these classes generally include economics, accounting, statistics, management, finance, marketing, and so on. Accounting is particularly a very important component of management, and it has rapidly regained its earlier bloom. At the same time, we are sending managerial personnel abroad to study and acquire advanced experience in management. In addition, we have already founded a national association for business management and published a series of journals, such as *Economic Management Monthly, Finance and Accountancy,* and *Chinese Finance Monthly.* Some of our newspapers have special columns on management.

Many large organizations, such as the Chinese Association of Enterprises Management, and the Chinese Association for Accountancy have been established in Beiping and various provinces. They are composed of scholars, professors, practitioners in individual departments, factories, mines, universities, and research institutes. Those associations are charged with the task of studying the theories, technology, and methods and experiences in management both at home and abroad, and with doing some translation work from English or Japanese into Chinese. Many problems on management and accounting are continuously under heated discussion.

We have established television and radio colleges, and correspondence schools in the larger cities. Many factories and companies also have established part-time schools. Last year, a total of 550,000 people studied at factory-run and part-time colleges. A number of staff and technicians have been sent to various countries, such as the United States, West Germany, Japan, Canada, England, and Yugoslavia. We, the Chinese people, understand that to realize the four areas of modernization as quickly as possible, we must rally the intellectual resources of the Chinese people, and we must make full use of the world's advanced achievements. We particularly have to learn from the United States, and that is why I came here.

Establishing International Transfer Pricing Standards for Tax Audits of Multinational Enterprises

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Few business decisions have greater impact on the operations of multinational enterprises (MNEs) than those involving pricing between affiliated companies located in different countries. The theoretical and practical difficulties present in these decisions have been discussed in the literature for many years. The problems are not new; however, their importance has increased significantly in recent years. The primary reason for this is the growing internationalism of economic activity. Although percentages vary significantly among countries, it is estimated that 40 percent or more of all international trade occurs between related parties.[1]

This paper focuses on the establishment of international transfer pricing standards for tax audits. The evidence indicates, however, that MNEs often utilize the same internal price for financial, managerial, and tax accounting. For example, fifty-seven of sixty-two respondents in a survey of MNEs agreed that "the same intercompany transfer price is used for financial accounting, for managerial accounting, *and*

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[1] Russell M. Moore and George M. Scott, eds., *An Introduction to Financial Control and Reporting in Multinational Enterprises,* Studies in International Business No. 1 (Austin, Texas: University of Texas at Austin, 1973), p. 62; and idem, *Transnational Corporations in World Development: A Re-examination* (New York: United Nations, 1978), p. 43.

for tax accounting."[2] If this is true for most related parties, then the growing pressure on these corporations by taxing authorities in many nations may have a significant impact on external and internal reporting practices as well as on taxes paid.

No one group or organization has the authority to establish international standards for taxation. Traditionally, this regulatory authority has been exercised by each nation for transactions affecting businesses operating within its boundaries. In some instances, more than one governmental agency is delegated this authority. For example, transfer prices are of interest to both customs and income tax officials. Laws and taxing objectives differ among countries. Few MNEs have considered this a serious problem in the past, especially in countries other than the United States. However, tax practitioners in several countries are reporting both an increasing interest in intercompany transactions and sophistication on the part of tax auditors. In many instances, these auditors are specialists in international matters and some are consultants with considerable business experience in the industry and occasionally even in the company under audit. These and numerous other factors are causing greater interest in the establishment of international standards for taxation of intercompany transactions.

This paper examines transfer pricing and taxation in four industrial nations: Canada, the Federal Republic of Germany, the United Kingdom, and the United States. The emphasis is on factors that make intercompany transactions a problem, efforts to establish international transfer pricing standards, recent developments in the four countries stressing the importance for establishing such standards, and what may be expected in the future.

TRANSFER PRICING AND TAX LEGISLATION

Taxation in Canada, Germany, the United Kingdom, and the United States requires that transfer prices adhere to an arm's length pricing standard. That is, the price between related parties must be the same as the price would be if it were between unrelated parties. Within each country, the definition of arm's length evolves from tax legislation, tax authorities, and the courts. Although taxation policies governing trans-

[2] Previously unreported data obtained in a study otherwise reported in Jane O. Burns, "Transfer Pricing Decisions in U.S. Multinational Corporations," *Journal of International Business Studies* 11 (Fall 1980): 23-39. Also, for example, see Jane O. Burns, "Accounting for the DISC: An Empirical Investigation," *International Tax Journal* 4 (April 1978): 886; and J. Alex Milburn, "This Problem Deserves More Than a Passing Yawn," *CA Magazine* 109 (December 1976): 27.

fer pricing have developed independently and to a different level of importance within each of the four nations, much similarity exists.

Tax Legislation

The most extensive legislation controlling related party transactions is found in the United States. Although Section 482 of the Internal Revenue Code is just one, albeit somewhat lengthy, sentence, the Department of the Treasury provides twenty-two pages of regulations to explain its application. The regulations establish three methods for determining arm's length prices applicable to intercompany transactions. They are comparable uncontrolled price, resale price, and cost-plus price.[3] Each price must be considered in the order it is listed. For example, the second method, resale price, can be used only if the first method, comparable uncontrolled price, is rejected as inapplicable. In situations where none of the three methods is available, variations of one of these or some other appropriate method may be adopted. No criteria for evaluating other acceptable methods, however, are contained in the regulations.

Canada and the United Kingdom also have tax laws directed toward intercompany transactions — Section 69 in Canada and Section 485 in the United Kingdom. As in the United States, the text of these laws is very brief and ambiguous. In contrast to the United States, however, neither country has formalized guidelines defining what constitutes an arm's length price. The perceived result is that while less complexity allows more flexibility for interpretation, it also may cause greater uncertainty.[4] There is some speculation that detailed Canadian regulations will be issued within the next year to help alleviate uncertainty in that country.[5]

Unlike that of most countries, the U.K. legislation ordinarily is applicable only to undervalued exports and overvalued imports. Sales between related resident companies are not subject to Section 485 as long as the transaction is reported for tax purposes by both companies.[6]

[3] U.S. Tres. Regs. 1.482-2.

[4] Philip J. Cooke, "Criteria for Inter-Company Transactions — United Kingdom," Management Centre Europe, International Tax Conference, Vienna, Austria, April 18-20, 1979, p. 7.

[5] Lecture notes based on a statement made by Carl F. Steiss, "Taxation of International Operations III," Price Waterhouse & Co. Seminar, New York, October 23-24, 1980.

[6] Peter Holdstock, "Taxation of International Operations III," Price Waterhouse & Co. Seminar, New York, October 23-24, 1980, p. 19; and Edo de Vries, "Inter-Company Pricing Provisions in the United Kingdom," *Intertax* (August 1980): 269.

This does not mean that pricing between resident companies is totally uncontrolled. If a price is deemed to be so low that it does not qualify as a business transaction, a market price may be substituted by Inland Revenue. In rare situations where a below-cost price is deemed to be ridiculously low, the seller must delete both the acquisition cost and sales proceeds from its trading accounts for tax purposes.[7]

Germany also has legislation designed to control transactions between related parties, Section 1 of the Foreign Tax Law. This section, enacted in 1972, is directed solely toward international transactions and only then when no other German tax provision is applicable. As a result, this legislation generally is overridden by Section 8 of the Corporate Income Tax Law.[8] Under Section 8, nonarm's length prices are deemed to contain a hidden profiit that is treated as a constructive dividend.[9] Germany, like Canada and the United Kingdom, does not have any legislated regulations or guidelines interpreting the arm's length standard. In fact, no specific criteria were discussed by legislators when enacting Section 1 of the Foreign Tax Law.[10] In contrast, tax authorities have internal guidelines not intended for public distribution and detailed regulations have been under consideration in recent years.[11]

Tax Authorities

Because tax legislation governing transfer pricing tends to be brief and ambiguous, tax authorities in each country have assumed much of the responsibility for developing a practical definition for the arm's length standard. The U.S. Internal Revenue Service (IRS) has had more experience auditing intercompany exports than have tax authorities in any other nation. Much of this work is performed by auditors specializing in international transactions. Since detailed U.S. regulations have existed for fifteen years, it could be assumed that the IRS has minimal discretion in interpreting the meaning of arm's length. Evidence, however, indicates otherwise. Three separate studies reveal

[7] Vries, "Pricing Provisions," p. 269.

[8] H. Becker, "National Criteria for Intercompany Transactions: The German Federal Republic," Management Centre Europe, International Tax Conference, Vienna, Austria, April 18-20, 1979, p. 3.

[9] Ibid., p. 1, and Jakob Strobl, "Pricing in Germany," Management Centre Europe, International Tax Conference, Vienna, Austria, April 18-20, 1979, p. 8.

[10] Juergen Killius, "A New German Statute Regulating International Tax Aspects — Its Implications for Multinational Companies," *Tax Management-International Journal* (February 1973): 6.

[11] Becker, "National Criteria," p. 5, and lecture notes based on statements made by Geoffrey S. Twinem, "Taxation of International Operations III."

that adjustments to transfer prices are most frequently based on methods other than those described in the regulations.[12] In addition, the studies report that many corporate executives do not support the regulations either. One of the primary reasons for rejecting the methods described in the regulations is that all three require reference to transactions between unrelated parties under similar circumstances. Frequently, no such transactions exist.

The Canadian experience with intercompany pricing tends to be the reverse of the U.S. experience, due to the fact that a large portion of Canadian business is foreign owned. According to a 1973 government report, foreign residents controlled 34 percent of the assets and 46 percent of the before-tax profits of all Canadian corporations except those included in the finance sector.[13] U.S. investment in Canada is greater than that of any other country. In addition, trade between the two countries is extensive. Consequently, Canadian tax authorities frequently have been exposed to IRS Section 482 audits. Many of these U.S. audits resulted in lower profits to Canadian subsidiaries. In most instances, Revenue Canada accepted these adjustments.[14]

Historically, Canadian tax authorities have shown little interest in initiating their own Section 69 audits. This situation has changed significantly in recent years, and especially in the last two years.[15] During this time, Revenue Canada has begun to develop a sophisticated group of specialized auditors with an objective of uncovering nonarm's length transactions. In some instances, individuals familiar with a particular industry are contacted for information. At the same time, there has been considerable interchange between Canadian and U.S. tax officials, partly stimulated by recent treaty renegotiations. The two countries also appear to have a mutual interest in Puerto Rican-based companies exporting to Canada.

U.K. companies traditionally have engaged in significant foreign trade. Although exports are encouraged, Section 485 has been avail-

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[12] Jane O. Burns, "How IRS Applies the Intercompany Pricing Rules of Section 482: A Corporate Survey," *Journal of Taxation* (May 1980): 308-14; Michael G. Duerr, *Tax Allocations and International Business* (Conference Board, 1972); and U.S. Department of the Treasury, *Summary Study of International Cases Involving Section 482 of the Internal Revenue Code* (Washington, D.C.: U.S. Department of the Treasury, 1973), reprinted in Rufus von Thulen Rhoades, *Income Taxation of Foreign Related Transactions* (New York: Matthew Bender, 1978), pp. 7-90–7-95.

[13] Minister of Industry, Trade and Commerce, *Annual Report, 1973* (Ottawa: Statistics Canada, 1976), pp. 16 and 21.

[14] R. D. Brown, "Canada–United States Tax Relations Problems," *Tax Executive* 28 (October 1975): 2.

[15] Steiss, "International Taxation."

able to the Inland Revenue since 1951. Little published information exists about U.K. transfer pricing audits. The Inland Revenue attitude, however, appears to be less agressive that that of the IRS or of Revenue Canada in recent months. Nevertheless, pricing of exports and imports with related parties is of much interest to Inland Revenue. In fact, there is a Section 485 unit composed of revenue agents specializing in this type of transaction. The group has been in contact with other tax authorities, and particularly with those in the United States. In addition to its own "investigatory work the unit has assembled a considerable store of data and statistics from many sources in the UK and throughout the world."[16] The objective of the group apparently is to achieve negotiated settlements rather than to formally apply the arm's length standard.[17] As a result, taxpayers have little information beyond their own experience about acceptable transfer pricing methods in the United Kingdom.

In Germany, the tax audit is an integral part of the assessment procedure. Most agents assigned to review multinational corporations have experience in the particular industry and in international tax law.[18] An important measure of arm's length pricing used by these auditors is adopted from German commercial law. It is based on the concept of whatever "an ordinary manager under the same or similar circumstances would have accepted is reasonable or appropriate."[19] This theory recognizes that an ordinary manager may have a number of available choices that are reasonable. Thus, a range or frame is established within which a given transfer price is acceptable. If a price is outside the frame, the advantage received may be compensated for by a similar legal or economic disadvantage or drawback with the same party. The offsetting advantages and drawbacks should occur in the same year. If this is impossible, it must be shown how and when (at least within three years) the accounts will be balanced. This approach appears to be much more flexible than those found in the other three countries.

As members of the European Economic Community (EEC), a significant portion of tax revenues in Germany and the United Kingdom is obtained from the value-added tax (VAT). All goods sold within the EEC generally include VAT while all goods sold outside the EEC are exempt from VAT. An interesting feature, then, of VAT is that it is

[16] Cooke, "Inter-Company Transactions," p. 6.
[17] Ibid., p. 8.
[18] Becker, "National Criteria," p. 12.
[19] Ibid., p. 9.

unaffected by transfer pricing methods for exports. This favored treatment given to exports may be taken into consideration by EEC tax auditors when reviewing intercompany exports. In contrast, tax revenues in Canada and the United States primarily are obtained from the income tax. One study suggests that North Americans are preoccupied with transfer pricing and that given a choice between tax revenues and exports, they would choose tax revenues while EEC countries would choose exports.[20] If there is any truth to this assertion, tax audits of transfer prices may never be as aggressively pursued in Germany and the United Kingdom as they are in Canada and the United States.

The Courts

In all four countries, the tendency is for disagreements concerning transfer prices to be resolved by negotiation between tax authorities and company officials. Comparatively few disputes are settled in the courts. In the extreme, no cases involving intercompany prices have reached the U.K. courts during the thirty-year existence of section 485 and its predecessor, Section 469.[21] Similarly, Canadian courts have not decided an arm's length pricing dispute during the past thirty years either. Prior to that time, there were a few cases in Canada dealing with deemed distributions and one in 1950 where the fair market value was in question.[22] There are no cases, however, considered to be relevant precedents in present day arms' length disagreements. Because of the aggressive audit stance being taken by Canadian Revenue agents, several disputes over prices Canadian parent companies charge foreign subsidiaries may be reviewed by the courts in the near future.[23]

The German court experience differs from that of both the United Kingdom and Canada since intercompany transactions usually are subject to control under its hidden profits legislation. Although there are numerous court decisions relating to hidden profits, few deal with international matters.[24] Partially because of the dearth of jurisprudence in all three countries, both tax authorities and company officials seek compromises to avoid the uncertainty of the courts.

Although few intercompany pricing disputes are litigated in the United States, the number far exceeds that of the other three countries.

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[20] G. F. Mathewson and G. D. Quirin, *Fiscal Transfer Pricing in Multinational Corporations* (Toronto, Canada: University of Toronto Press, 1979), p. 21.
[21] Cooke, "Inter-Company Transactions," p. 5.
[22] Lecture notes based on statements made by Steiss.
[23] Brown, "Tax Relations," pp. 3-4.
[24] Becker, "National Criteria," p. 5.

In the early cases, the IRS generally attributed all income to the parent company based on the argument that the affiliate had no business purpose other than tax avoidance. Thus, the question of an acceptable price was not considered. Pricing disputes, however, have come before the courts since the issuance of the regulations in 1968. Both the government and several taxpayers have successfully argued the appropriateness of pricing methods contained in the regulations. In many instances, the courts appear to be uncomfortable with the regulations and search for "reasonable" prices or settle on profit splits. It is difficult to view the decided pricing cases in the United States as relevant precedents since the facts tend to be unique for each taxpayer and the courts frequently make unexplained adjustments to the prices.

While arm's length is the generally accepted standard for transfer prices in the four countries, this standard remains undefined. Legislators in each country have avoided the problem. The few court decisions are inconclusive. Accounting organizations show no interest in establishing standards in this area. Thus, by default, the definition of arm's length slowly evolves from negotiation and compromise between tax authorities and company officials. This definitional approach produces standards that are not publicly available. Thus, while revenue agents have access to information gathered from tax audits in many countries, the taxpayers' knowledge rarely extends beyond their own experiences.

THE APPROACH TO ESTABLISHING STANDARDS

The rapid growth in international activities between related parties has led to a need for international standards beyond the ambiguous arm's length tenet. Organizations prominently involved in recommending international standards for intercompany transactions include the Organisation for Economic Co-operation and Development, the Business and Industry Advisory Committee, the United Nations, the Accountants International Study Group, and the International Chamber of Commerce. Each of these organizations has published one or more reports discussing the need for international cooperation and the merits of specific proposals. All of the organizations have a common objective: establishment of international transfer pricing standards as much as practicable, given the differing legal, political, social, and environmental constraints in the countries. Presently, the approach is to provide guidelines that will be adopted voluntarily and eventually become accepted in much of the world.

Interest in developing international rules for intercompany transactions historically has been stimulated by the threat of double taxa-

tion. With the end of World War I and a surge in world trade, the International Chamber of Commerce was formed. One of its primary goals was to encourage nations to negotiate agreements preventing double taxation. In 1922, the League of Nations appointed a committee to study the problem. Three years later, the committee recommended that a group of technical experts be commissioned to prepare a draft convention to serve as a model for the growing number of treaties being negotiated. The first draft convention, published in 1928, has been succeeded by a number of similar reports and drafts.[25] In recent years, leadership in this work has been assumed by the Organisation for Economic Co-operation and Development (OECD). This organization, representing twenty-four industrialized nations, has considerable worldwide influence.[26]

Two OECD documents are proving quite effective in achieving greater conformity in the treatment of intercompany transactions. One, the *Model Double Taxation Convention on Income and on Capital,* published in 1977, has served as a model for most recently negotiated treaties.[27] Its role in establishing international transfer pricing standards is discussed in the next section. In 1979, OECD released its report on *Transfer Pricing and Multinational Enterprises.* The stated objectives of the 1979 OECD report are

> ... to set out as far as possible the considerations to be taken into account and to describe, where possible, generally agreed practices in determining transfer prices for tax purposes. It is hoped that, by doing so, the report will not only help tax officials to approach more effectively the problems presented to them by the transfer prices of multinational enterprises but will also help the enterprises themselves by indicating ways in which mutually satisfactory solutions may be found to those tax problems.[28]

The basic premise of the OECD report is that all transactions must conform with the arm's length principle. In an effort to define this

[25] Adrian A. Kragen, "Double Income Taxation Treaties: The O.E.C.D. Draft," *California Law Review* 52 (May 1964): 307.

[26] OECD member nations are Australia, Austria, Belgium, Canada, Denmark, Finland, France, the Federal Republic of Germany, Greece, Iceland, Ireland, Italy, Japan, Luxembourg, the Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, the United States, and the United Kingdom.

[27] Organisation for Economic Co-operation and Development Committee on Fiscal Affairs, *Model Double Taxation Convention on Income and on Capital* (Paris, France: Organisation for Economic Co-operation and Development, 1977).

[28] Organisation for Economic Co-operation and Development Committee on Fiscal Affairs, *Transfer Pricing and Multinational Enterprises* (Paris: Organisation for Economic Co-operation and Development, 1979), pp. 9-10.

principle, the report draws heavily from the U.S. regulations. That is, four pricing methods are presented as appropriate measures: comparable uncontrolled price, resale price, cost plus price, and "any other method which is found to be acceptable." These appear to be the same methods as those described in the regulations. The major difference between the OECD approach and that of the U.S. regulations is that the OECD wording allows for considerably more flexibility than do the U.S. regulations. As previously discussed, the regulations hold that the methods must be considered in their listed order and that no method can be adopted until those listed ahead of it are rejected as inappropriate. In contrast, the OECD report imposes no such rigid order; it states that while the comparable uncontrolled method is the most appropriate in principle, in practice "it often happens that such evidence is not available or it is impracticable to collect it together or there is argument about whether the prices quoted are comparable or not."[29] Thus, the three specified methods appear to be OECD suggestions rather than standards or requirements. Although there is minimal discussion of other acceptable methods, safe-haven approaches are strongly rejected as too arbitrary. The refusal on the part of OECD and the IRS to consider any predetermined formula for approximating arm's length may disappoint some businessmen and tax authorities. After all, the ability to eliminate uncertainty with mathematical approaches can be very appealing.

The OECD report concludes with a council recommendation that governments of member nations insure that the report receive wide publicity and is used by tax authorities. The governments also are encouraged to "develop further co-operation between their tax administrations, on a bilateral or multilateral basis, in matters pertaining to transfer pricing."[30] Finally, the council instructs the Committee on Fiscal Affairs to continue its work on this subject.

The Business and Industry Advisory Committee (BIAC), representing the business interests in OECD member nations, was formed in 1962 as an independent but officially recognized group by OECD. The purpose of BIAC is to interact with and respond to OECD's work; basically, it agrees with the report and states that it "is a useful contribution to efforts being made to achieve some degree of uniformity in this overly complex field, which, as the report notes, is in the best interest of both governments and multinational enterprises."[31] BIAC

[29] Ibid., p. 13.
[30] Ibid., p. 96.
[31] Dag Helmers, "BIAC's Response to the OECD Report on Transfer Pricing and Multinational Enterprises," *Intertax* (August 1980): 287.

criticizes the report for failure to discuss marginal costing and pricing, and expresses the fear that this omission may cause tax authorities to believe these to be unacceptable procedures. In addition, BIAC believes the report should have declared that a MNE's pricing method is acceptable if it is consistently applied and conforms with generally accepted accounting practices.[32] Finally, BIAC recommends that MNEs be allowed to obtain advance rulings concerning the acceptability of a pricing method from tax authorities.[33]

Evidence indicates that the OECD report will be widely accepted in Canada, Germany, the United Kingdom, the United States, and many other countries.[34] In fact, many countries have used the U.S. regulations as points of reference for quite some time. The greater flexibility of OECD toward pricing methods contained in the regulations seems to reflect the attitude of tax authorities in these nations and meets with BIAC approval.

TAX TREATIES

As international transactions have become increasingly common, the incidence of conflict among taxing authorities of different nations also has increased. The purpose of the tax treaty is to resolve such conflicts in an equitable manner satisfactory to all parties involved. Due to numerous differences in laws of the taxing jurisdictions involved, a multitude of tax treaties has resulted with an equal number of solutions. In an attempt to remove this variability among treaties, the Committee on Fiscal Affairs of the OECD issued a model tax treaty in 1963 and a subsequent model with revised commentary in 1977.[35] The result is a model double taxation convention (hereinafter cited as OECD Model) which provides a means of settling, on a uniform basis, the most common problems which arise in the field of international double taxation. Although not legally enforceable of its own accord, the OECD Model has become the standard for other bilateral treaties which do constitute legally binding international instruments among contracting states.[36]

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[32] Ibid., p. 292.
[33] Ibid., p. 293.
[34] Ibid., p. 289; Becker, "National Criteria," p. 7; Holdstock, "International Operations," p. 19; Killius, "German Statute," p. 6; and Strobl, "Pricing in Germany," p. 9.
[35] Organisation for Economic Co-operation and Development Committee on Fiscal Affairs, *Model Double Taxation.*
[36] Contracting state, as used in the context of tax treaties, refers to the country which is a party to the tax treaty.

The main portion of the OECD Model dictates the extent each of two contracting states claiming jurisdiction may tax income and capital and how double taxation is to be eliminated. Where the country of *source* of income is given an exclusive or limited right to tax such income, the state of *residence* must allow relief to avoid double taxation. The types of business income stressed by the OECD Model can be divided into two classes, depending on the treatment accorded by the state of source: (1) income not taxed in the state of source, and (2) income taxed without any limitation in the state of source. If income falls in the first category, no problem of double taxation exists. Such items of income are taxable only in the state of residence, and the state of source must grant an exemption.

In the second category, the state of source may tax income without any limitation. When this occurs, the state of residence may choose either of the following methods to avoid double taxation.

1. The exemption method provides that income taxable in the state of source will be exempted in the state of residence. Such income, though, may be considered in determining the rate of tax applicable to the taxpayer's remaining income.
2. The credit method provides that income taxable in the state of source also may be taxable in the state of residence. However, the tax levied in the state of source will be credited against the tax levied by the state of residence on the same income.

One category of income subject to tax without any limitation in the state of source is business profits. The OECD Model provides that business profits in a contracting state will be taxable only in that country unless the enterprise conducts business in a second contracting state via a permanent establishment, that is, a parent company dealing with a foreign subsidiary. In such case, profits attributable to the subsidiary can be taxed by the host country. Where an enterprise based in one contracting state conducts business through a foreign subsidiary in a second contracting state, tax authorities can reallocate profits to the subsidiary as if it were an unrelated entity. The OECD Model thus adopts the arm's length concept as the common standard for determining international transfer prices among related parties.

Whenever transfer prices are adjusted by tax authorities in one contracting state, double taxation results if business profits also have been taxed in the second contracting state. Tax authorities in the second country should make compensatory adjustments in the taxes originally paid in that country. If conflict arises, it may be necessary

to seek relief from the competent authorities of the two contracting states. Regardless of whether adjustments evolve from laws of the contracting state or by resolution of the competent authorities, the state of source has the ultimate responsibility to make appropriate adjustments. The reverse also holds true when changes are made to subsidiary accounts by the host country.

Both the concepts found in the OECD Model regarding allocation of business profits between related enterprises and the methods prescribed for elimination of double taxation have been followed closely by the United States in its tax treaties with other countries. Profits are allocated as if similar transactions were conducted between independent parties and the tax is levied accordingly. For internal revenue purposes, the United States applies the credit method to avoid double taxation. However, slight variations from the OECD Model cause differences in interpretations of U.S. tax treaties.

The U.S.–U.K. Income Tax Convention[37]

The OECD Model contemplates that related enterprises comprise either direct or indirect participation by a company in various aspects (management, control, or capital) of a business located in a second contracting state or where any third person similarly controls both of these businesses. In contrast, the U.S.–U.K. treaty states that two parties are related only if one controls the other or if a third person controls both. Also, where the OECD Model makes provisions for the reallocation of profits between related parties and the appropriate taxation, the U.S.–U.K. treaty encompasses the allocation of losses as well as profits. In both the OECD Model and the bilateral treaty, Article 9(1) encompasses the concept of arm's length transactions among related parties.

Article 9(2) of the U.S.–U.K. treaty is very similar to Article 9(2) of the OECD Model. Thus, a U.S. parent with exports to a U.K. subsidiary whose profits on these intercompany sales are increased by the U.K. Inland Revenue may invoke Article 9(2) against the IRS in order to obtain a corresponding decrease in profits. The IRS is not, however, bound to accept Inland Revenue adjustments to transfer

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[37] "Convention between the Government of the United States of America and the Government of the United Kingdom of Great Britain and Northern Ireland for the Avoidance of Double Taxation and the Prevention of Fiscal Evasion with respect to Taxes on Income and Capital Gains," signed at London December 31, 1975; and amending agreement effected by exchange of notes (1976); and amending protocols (1976, 1977, and 1979); entered into force April 25, 1980.

prices. Article 9(3) provides for the right of disagreement and directs that the competent authorities attempt to resolve the disagreement. This same recourse may be found in Article 9(2) of the OECD Model. However, neither the U.S.–U.K. treaty nor the OECD Model answers the question of what happens upon failure to agree.

The U.S.–Canadian Income Tax Convention[28]

The U.S.–Canadian Income Tax Convention is the newest tax treaty examined here. Much of it is based on the U.S. and OECD models. However, it deviates from these models in some areas in order to recognize particular features of Canadian law and its interaction with U.S. law and the economic relationship between the two countries.

Provisions of the U.S.–Canadian income tax treaty regarding attribution of business profits to a permanent establishment are virtually identical to those found in the OECD Model. Article 7(2) of both treaties envisions a determination of business profits as if independent or arm's length transactions occur between related persons.

For purposes of defining related persons for the U.S.–Canadian convention, Article 9(1) of the OECD Model serves partially as the standard. It specifies that if one person participates directly or indirectly in the management or control of the other, or if third parties participate in the management or control of both, then these persons are related. Similar to the U.S.–U.K. treaty, arrangements between related parties which differ from those of unrelated persons may be restructured by each country to reflect income, deductions, credits, or allowances that would typically take place between unrelated parties. The treaty then differs radically from previous U.S. treaties. Where adjustments to income, deductions, and such, are made by one country, corresponding adjustments to avoid double taxation must be made by the other country. This is similar to Article 9(2) of the OECD Model, but with the added proviso that the adjusting country must notify the other country of its actions. Where no notice is given, the adjusting country cannot make any adjustments that result in double taxation. Thus, unlike the OECD Model and the U.S.–U.K. treaty, both countries must agree to the reallocations and due notice must be provided by the adjusting country prior to any changes that may result in double taxation.

[28] "Convention with Canada with respect to Taxes on Income and Capital," Message from the President of the United States transmitting A Convention between the United States of America and Canada with respect to Taxes on Income and Capital, signed at Washington on September 26, 1980, with a related exchange of notes (Washington, D.C.: U.S. Government Printing Office, 1980).

The U.S.–German Tax Treaty[39]

The U.S.–German tax treaty was drafted before the 1963 OECD Draft Convention, and, thus, is not as comprehensive as the OECD Model or recent treaties such as those with the United Kingdom and Canada. Although articles of the U.S.–German tax treaty do not discuss in the same order or same format those topics covered in the OECD Model, the content is much the same. Thus, Article 3(1) and Article 3(2) of this treaty are similar to Articles 7(1) and 7(2) of the OECD Model. All cover taxation of profits attributable to a permanent establishment based on the generally accepted standard of dealing at arm's length with a related party. Article 4 of the U.S.–German treaty is similar to Article 9(1) of the OECD Model. In both, profits which would otherwise accrue to one of the related parties can be included in its accounts and taxed accordingly. The bilateral treaty, however, contains no provision similar to that found in Article 9(2) of the OECD Model. Thus, one contracting state is not directed to make adjustments in its tax in response to a reallocation of intercompany prices by the other contracting state. When double taxation does occur, the United States allows the appropriate amount of German taxes paid as a credit against the U.S. tax. This is similar to the approach allowed in Article 23B of the OECD Model.

The OECD Model authorizes tax auditors in contracting states to reallocate profits between related parties when export prices are not based on the arm's length standard. All three treaties discussed here adopt this standard for MNE transactions across national borders. None of these treaties, however, include a definition of arm's length. Instead, the definition is left to tax authorities in each country and to the OECD report. The OECD Model does provide for adjusting profits and assessing additional taxes. The Model also establishes methods for the exchange of information and resolution of double taxation disputes through its competent authority provisions. The incorporation of these OECD Model articles into the three bilateral treaties provides a significant degree of uniformity for tax audits of international transfer pricing.

COMPETENT AUTHORITY AND EXCHANGE OF INFORMATION

The concept of competent authority is a creation of tax treaties. Where

[39] "Convention between the Federal Republic of Germany and the United States of America for the Avoidance of Double Taxation with respect to Taxes on Income and to certain Other Taxes," United States–German Tax Treaty of July 22, 1954, as amended (Washington, D.C.: Tax Management Inc., a division of the Bureau of National Affairs, Inc., 1978).

relief from double taxation is not achieved through adjustments by the contracting states under Article 9(2) of the OECD Model, Article 25 provides that the taxpayer may seek help from his country's competent authority. It is the competent authority's responsibility, by mutual agreement with the competent authority of the other contracting state, to seek relief from double taxation. Thus, the competent authority acts as the taxpayer's advocate to provide relief from double taxation, as governed by the tax treaties.

In the United States, the assistant commissioner — compliance is the competent authority for administering operating provisions of tax treaties and is responsible for negotiating agreements to provide relief from double taxation to U.S. taxpayers. The U.S. assistant commissioner — technical is the competent authority in interpretive matters, and issues technical advice on treaty matters. From the U.S. viewpoint, most cases involving competent authority relief are related to Section 482 adjustments. Thus, a taxpayer who seeks competent authority relief, by implication, agrees with the IRS adjustment under Section 482. However, if the other country refuses to accept these adjustments to income, the United States usually abandons the Section 482 adjustments to protect the taxpayer from double taxation.[40] The OECD Model, however, does not require that this unilateral relief be granted, nor do U.S. treaties with other countries provide such a solution. Furthermore, in Section 482 pricing disputes, the competent authority will request the taxpayer to agree to either complete relief from double taxation, a compromise solution, or abandonment of the Section 482 adjustments.[41] If Section 482 adjustments via the competent authority are unsuccessful, the taxpayer's only recourse is to appeal the adjustments through regular IRS appeal procedures.

If a taxpayer concludes that he has been subjected to taxation contrary to provisions of a treaty, Article 25(1) of the OECD Model provides that the taxpayer may submit his case to the competent authority provided he does so within three years of the questionable adjustment. In U.S. treaties with the United Kingdom, Canada, and Germany, however, this time limitation is not imposed. In fact, competent authorities of the United States and Germany have adopted a flexible attitude for resolution of cases concerning double taxation involving their own statute of limitations or that of the other con-

[40] Jack Schuster and Milton Fichtenholz, "Competent Authority Cases: A Practical Approach to Relief from Double Taxation," *Journal of Taxation* 47 (November 1977): 290.

[41] Ibid., p. 293.

tracting state.[42] In cases involving related parties, unilateral relief against double taxation generally will be provided by both countries if the statute of limitations of the other contracting state has expired. The United Kingdom, however, strictly adheres to its own statute of limitations. Furthermore, in the U.S.–Canadian treaty, any agreement reached between the competent authorities will be implemented, regardless of time or procedural limitations in the domestic laws of the countries, provided the appropriate notification was made to the competent authority of the other country within six years. Such references to implementation regardless of time or procedural limitations cannot be found, however, in either the German or the U.K. treaty with the United States.

In the countries involved here, only the United States and Canada have developed written competent authority procedures. Administrative practices are used in the United Kingdom and Germany to establish competent authority procedures. In the United States, revenue rulings also have established competent authority procedure. One ruling, known as the mandatory competent authority ruling, requires recourse to U.S. competent authority procedure before the foreign tax credit limitation may be increased.[43]

To carry out the provisions of a bilateral treaty, Article 26 of the OECD Model states that necessary information will be exchanged by the competent authorities. The information exchanged is considered confidential and can be disclosed only to persons or authorities involved in matters concerning taxes covered by the treaty. The OECD Model also provides that contracting states are not obligated to supply information which would disclose trade or commercial secrets. For example, pricing information generally would be considered a trade secret if its disclosure would confer a competitive advantage. If, however, pricing is used as a noncompetitive device to evade taxes, an exchange of information would be necessary to achieve a proper allocation of income. Thus, the exchange of information system is designed to increase the competent authority's access to information while protecting the taxpayer's rights to privacy and to equitable and nondiscriminatory taxation. This increased access to information coupled with a right to privacy can be achieved only if information obtained is treated with confidentiality. Article 26(1) of the OECD Model

[42] Philip L. Eiker, "Competent Authority: At Home and Abroad," *International Tax Journal* 5 (February 1979): 211.
[43] Rev. Rul. 76-508, 1976-2 C.B. 225.

provides for such secrecy, and similar provisions are found in U.S. treaties with the United Kingdom, Canada, and West Germany.

Each treaty, like the OECD Model, provides for disclosure only to appropriate authorities involved in the assessment or collection of taxes or the enforcement or prosecution regarding taxes covered by the bilateral treaty. Although secrecy of information is assured by each treaty, disclosure to courts or administrative bodies also is provided. The commentary to Article 26 of the OECD Model clarifies that this information may be rendered public if court files or decisions are examined but adds the qualification that either contracting state may object to such disclosure as being abnormal under its domestic laws. The objecting country should then state this reservation in its treaties. In addition, disclosure of certain information may reveal trade or commercial secrets. In such cases, a country is given certain discretion to refuse the requested information in order to protect the interests of its own taxpayers. Thus, although disclosure of information is required via the exchange of information procedure in each treaty, information need not be supplied which would be contrary to a contracting state's public policy.

In summary, the OECD Model provides for an exchange of information concerning taxation not contrary to the convention that is necessary for implementing the provisions of the tax treaty. This exchange mechanism only has importance in the context of a comprehensive income tax treaty which provides for nondiscrimination, the treatment of business profits, or the allocation of profits among related enterprises. Following the standards set by the OECD Model, the U.S. treaties with the United Kingdom, Canada, and Germany provide information exchange systems to help achieve avoidance of double taxation.

CONCLUSION

No one group or organization has the authority to establish international transfer pricing standards for tax audits of MNEs. Nevertheless, the arm's length concept is widely recognized as the basic standard to be applied to intercompany pricing of exports. This nearly universal acceptance primarily is due to the influence of U.S. tax authorities, the OECD report on transfer pricing, and the OECD Model tax treaty.

Although arm's length is a commonly adopted standard, there is no similar acceptance of what constitutes an arm's length price. The

United States, unlike Canada, Germany, and the United Kingdom, has written regulations that rigidly specify three pricing methods to be used. In recommending the adoption of guidelines for implementing arm's length as a standard for pricing, a U.N. report praised the United States for its efforts.[44] Evidence indicates, however, that both MNEs and IRS agents commonly resort to methods not included in the regulations. Nevertheless, the OECD report accepts similar pricing methods which many nations are adopting. In all of these instances, the methods are offered as suggestions or guidelines with much greater flexibility than that indicated in the U.S. regulations. Whether generally accepted standards for implementing arm's length pricing will evolve from these methods remains to be seen.

Since the meaning of arm's length continues to be ambiguous, the role of bilateral treaties in resolving international pricing conflicts is very important. The OECD Model serves as the prototype on which recently negotiated treaties are based. This is a significant contribution toward uniformity among nations that should result in better understanding and facilitate international trade.

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[44] United Nations, Department of Economic and Social Affairs, *The Impact of Multinational Corporations on Development and on International Relations* (New York: United Nations, 1974).

Accounting in Developing Countries before and after Social Crisis: The Case of Iran

TAHIRIH KHODADOUST FOROUGHI*

During the period 1973 to 1975, the author undertook a research project concerning accounting education and the accounting profession in Iran. Results of this study were offered to the Iranian Ministry of Higher Education, together with recommendations for the improvement of these two areas.

During the same time period, the Committee on Accounting in Developing Countries of the American Accounting Association (AAA) conducted research into the educational and professional problems of accounting in developing countries.[1] Results of this study published in 1976 enabled the author to compare the findings of her study with those of the committee's research. There were many similarities in the findings of the two studies. George M. Scott's study of international accounting problems[2] indicated quite similar conclusions to those found in the author's study of Iranian accountancy. The problems regarding accounting education are reported in each of the three studies.

The case of Iran is of great significance because many similarities

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[1] George M. Scott et al., "Report of the Committee on Accounting in Developing Countries," Supplement to vol. XLXI, *Accounting Review* (1976).

[2] George M. Scott and P. Troberg, *Eighty-Eight International Accounting Problems in Rank Order of Importance* (Sarasota, Fla.: American Accounting Association, 1980), pp. 21-27.

exist between Iran and numerous other developing countries. They follow, more or less, the same path of economic and industrial development; they are faced with social problems resulting from various factors including duality between the levels of their economic and industrial development and their social evolution; they are faced with the potentials of social and political revolution; and finally, their accounting professions will find it very difficult to cope with future social and political changes. The present is the mirror of the past and we all learn from each others' experiences; this study, therefore, may be beneficial to the profession in other developing countries.

This article compares the results of the three studies mentioned earlier concerning the international accounting world. The status of accounting education and of the profession in Iran before the 1978-79 crisis has been examined, and the fate of Iranian accounting education and the profession after the social crisis of 1978-79 has been scrutinized. In conclusion, an examination of problems, changes, and challenges that Iranian accounting is facing is presented with the hope that these examinations might be useful for students and scholars in the area of international accounting.

IRANIAN RESEARCH

Impact of Private Industrial Development on Different Functions of Accounting in Iran (Prior to 1978–79 Crisis)

The role of accounting in developing countries in general was first studied. This study, based on the writings and findings of many accounting scholars, indicated that accounting can help the economic and industrial development process of developing countries in two major ways: (1) by leading and guiding the investing parties to invest in useful, profitable and productive projects, and (2) by helping the management of the industrial and business enterprises to plan for the efficient utilization of development capital. This study also reflected that the relative importance given to the accounting function in an economy depends on several factors including the following: the number and size of economic enterprises in the country; the degree of familiarity of managers and other groups and individuals with accounting and its roles and functions; the volume and types of accounting information needed and used by managers, individuals, organizations, and the government; the volume of credits and loans granted as well as procedures used for loan and credit analysis, approval, granting, and follow up; the existence of an independent accounting profession; the existence of an established set of accounting

rules, procedures, and principles; the existence of governmental regulations related to accounting and financial matters and their enforcement method; and the degree of the public's understanding of the importance and role of accounting. Based on a normative approach, this list was later used in relation to and for the evaluation of the situation and place of accounting in Iran.

Keeping in mind the result of the study on the role of accounting in developing countries, the author proceeded to investigate the place and position of accounting in precrisis Iran. First, the volume and type of private enterprise accounting information needed by the capital market were examined. This examination was useful in deciding the relative importance given to accounting in the economic and capital market. Among many other findings, the study revealed that the Iranian capital market of the 1960s and 1970s consisted of an equity market and a loan market, and that individuals as well as institutions, such as banks, were active in both of these markets. Banks had mainly provided loan and credit, whereas individuals had been the major providers of equity capital. The Tehran Stock Exchange (TSE) was one of the active parts of the Iranian capital market. It was the only Iranian institution which required corporate financial reporting and disclosure of accounting information. It also regularly published financial, statistical, and accounting data on its member corporations. Transactions in this exchange began in 1970 and were expanded by a program for "wider share ownership" begun in 1972.

Other findings of this research were that the TSE was mainly active as a stock (equity capital) market for the private industrial and banking sector, that Iran had no market for private-sector interest-bearing securities, and that the TSE was not active in corporate bonds.

Iranian banks were active in investment as well as in commercial lending activities. Short-term and working-capital lending had historically been an important function of commercial banks. Long-term lending and occasional equity financing were a function of specialized banks and lending institutions, such as the Industrial and Mining Development Bank of Iran (IMDBI), the Industrial Credit Bank (ICB), and the Industrial Guarantee Fund (IGF). The specialized banks, such as IMDBI, normally approved a loan on the basis of project soundness and feasibility. After a loan was granted, a regular follow-up audit and an analysis were performed throughout the life of the loan. Other newly formed specialized banks followed more or less the same professional approach, but commercial banks were not

very sophisticated in their loan processing, even in cases where long-term industrial loans were granted.

Aside from commercial banks, there were two other channels of obtaining short-term money in Iran. One was trade and suppliers' credit and the other was the unorganized money market outside the banking regulations (bazaar lenders: "Sarrafs"). The latter was, of course, very expensive and required heavy collateral, normally promissory notes. Intangible property collateral was not popular in Iran, since the civil code provisions prohibited this type of collateral arrangements. However, the foreign exchange policy of the central bank of Iran announced in 1974 led to a new plan for short-term lending by commercial banks. Bank Sepah, a leading commercial bank, began lending in rials (Iranian currency) to customers against the security of foreign-exchange holding abroad. The foreign capital market and international loan and credit agencies normally required accounting information and financial analysis for their potential loan and equity investment projects, although commercial banks normally did not use an accounting basis for appraising their short-term loans. However, government's use of private enterprise accounting information, although needed for many purposes such as profit-sharing laws in industries, pricing, price control, and taxation, never achieved its potential level.

To summarize, this part of the research revealed that the TSE was the major institution which required accounting information from its members. Banks (mostly specialized banks) also required accounting data from their clients while bazaar lenders and suppliers did not require such information. The foreign capital market (individuals and agencies) active in Iran also demanded and used accounting data. The Iranian government used some private enterprise accounting data for various purposes, but it never considered this data to be reliable and it never developed a good procedure for the efficient utilization of this information.

Interaction between accounting and industrial development in Iran (prior to the 1978-79 crisis). The analyses and inferences of this and the next section of this article are primarily based on information obtained by the author from a sample population of private Iranian industrial enterprises; another source was interviews with investors, managers, and entrepreneurs, as well as with accountants, bankers, accounting educators, and other informed individuals.

Interviews and questionnaires are both limited as research devices,

but their use was justified in this case on the basis that, with the exception of the author's own observations, search for evidence, and personal experience, interviews and questionnaires were the only research devices available to investigate Iranian accounting. This was mainly due to the lack of prior literature and scholarly work, and, of course, partly because it was not possible to perform scientific, practical testing on this subject, as opposed to areas such as the applied sciences.[3]

The author hypothesized that *private industrial development had been one of the important factors influencing the change and evolution of accounting education and profession in Iran.* Therefore, this hypothesis was examined in light of the study on accounting information needed from private industry by the Iranian capital market as well as inferences derived from the information-gathering process also explained.

A study of the perception of the role of accounting in industry enabled assessment of the degree of management's understanding of the crucial role of accounting in Iranian industry. A study of the place, role, type, and function of accounting in industry assisted in the measurement of the significance of the evolution caused by the industry in Iranian accountancy.

The evaluation of accounting skills employed in private industry aided in understanding how industrialization had influenced the accounting profession by affecting the number of accounting skills that it had required. Accounting standards as viewed by industrial managers served as an indication of industry's interrelationship with the world of accounting. Private industry's use of accounting services was a clear measure of the need of private industry for, and its consequent impact on, the accounting profession in Iran. An evaluation of the way in which industry had served as a channel for transfer of accounting knowledge and skills into the country was based on a study of foreign and other influences on accounting. Finally, private industry's use of outside services was a good indicator of how industrialization had led to the creation of satellite services, which, in turn, had required diversified accounting skills.

Findings

Iranian accounting at the turn of the century was still based on the

[3] For details of the sampling procedures and questionnaire distribution, see Appendix.

single-entry system and used "siagh" symbols.[4] Modern accounting and double-entry bookkeeping were imported into the country from several other countries simultaneously with the increased opening of the country's doors to foreign capital. British, French, and later American methods were introduced. Banks originally had the most significant effect in spreading modern systems of accounting in the country, with the opening of Bank Melli Iran in 1927 being one of the most important influences on the initial development of modern accounting. An important step was taken by Bank Melli Iran for the advancement and enhancement of Iranian accounting in the early 1930s when the management of the bank decided to send a small group of young Iranians to England to be trained as chartered accountants. The members of this group played a considerable role in the spread of Western accounting thought and knowledge in Iran. Gradually a few businesses and industries which had relations with banks and with foreign countries realized the merits of double-entry bookkeeping and began to use modern accounting.

As it expanded, private industry influenced the advancement and evolution of Iranian accounting. Another factor which stimulated the utilization of accounting information for more diversified purposes was the relative expansion of the firms' ownerships; especially the move toward wider share ownership and the creation of Sherkate Sahamie Am as the corporate form of company ownership was instrumental in this respect.

Until the 1950s, managerial accounting and its terminologies (ratio analysis, cash flows, budget forecasts, and rate of return) were unknown to the majority of Iranian accountants. By the 1970s, these elements were being taught in accounting programs and were used more and more by accountants and managers throughout the country. In the 1950s, sophisticated accounting information systems were practically nonexistent but had gradually become commonplace in the expanding Iranian industry by the 1970s when a better understanding of the accounting role and function prevailed in the country as a response to two or three decades of expanding industrialization. Had the country not entered the heavy industrialization era, the introduction of management accounting thought and the expansion of sophis-

[4] Special symbols used in recording information in books of accounts. For detailed information in this respect, see Tahirih Khodadoust Foroughi, "Some Aspects of Ancient Iranian Accounting" (paper presented at the Third International Congress of Accounting Historians, London, August 1980). A copy is available from the University of Nevada-Reno, Bureau of Business and Economic Research.

ticated accounting information systems would not have materialized in the Iranian environment.

Other major findings of the industry section of the research are the following. First, managers and accountants in the Iranian industrial enterprises recognized the role of accounting with their interest and emphasis mainly centered on the managerial function of accounting. Secondly, although interested in the managerial functions of accounting, managers of private industries were not fully aware of and acquainted with the procedures and utilization of accounting information for improving efficiency and for decision making.

The internal role of accounting in private industry centered around the measurement of the performance of intrafirm units, and costing. Internal and managerial accounting in many cases provided the management with the verification of past transactions, but not with all the data and analysis required for decision making. Types of external services normally provided by the accounting systems in private industry were financial statements for stockholders, data for long-term borrowing, tax reporting, and government-required reports and statistics.

Almost no firm reported the function of "attracting potential capital from the capital market" among important external services rendered by its accounting information system. Nor was there any mention of potential shareholders among the users of their financial statements. This was because the capital market lacked a sufficient number of transactions for channeling funds to industrial projects. Despite the existence of the TSE, manufacturing companies in the 70s were still primarily in the hands of a small number of families with tight control over private industry during the boom of the 60s and 70s. The move toward wider share ownership was effective in slightly changing the mentality of share ownership in the country.[5]

In May 1972, the government declared that all private industry should offer one-third of its ownership to the public. This ratio was increased to 49 percent in 1973 with purchase option to be given to the workers. However, the first company which offered part of its shares for public ownership did not attach to its offer any statements of accounting dividends.[6]

Even though TSE transactions gradually grew in the 70s, potential investors outside the circle of friends and business acquaintances did not show great enthusiasm for buying private industries' stocks, due,

[5] *The London Economist,* 29 May 1972, p. 117.
[6] Ibid.

of course, to lack of confidence. Banks were viewed by people as more publicly reliable agents than were the private industrial companies. Also, since people did not view industrial projects as a sufficient hedge against inflation and uncertainty, they invested their savings in assets more reliable than company stocks, such as gold, carpets, and real estate.

The main obstacles to the growth of the official capital market were the lack of confidence in future price levels, the absence of a sufficient number of corporations whose capital was supplied by a substantial number of individual average investor/stockholders, and the lack of real corporate stock and bond capital, partly due to tax evasion by suppliers of capital, and partly due to the unwillingness of firms' owners to accept outsiders as co-owners.

Accounting information systems in most of the Iranian private industrial firms had gone through an evolutionary pattern from simple bookkeeping and accounting to larger systems, and in some cases to relatively sophisticated information systems. In most cases, the evolutionary pattern of company accounting systems had had a trend toward internal reporting and management accounting.

Accounting skills. Only a minority of top managers of private industrial concerns had formal accounting education. However, many of them had been exposed to accounting-related issues. The absence of accounting skills in the country was attributed to poor college education, lack of experience, and shortage of accounting literature in Farsi. A majority of respondents expressed the belief that accountancy was not performing its potential duty and responsibility.

Accounting standards. In practice, Iran lacked a set of generally accepted accounting principles and a well-understood code of accounting standards and professional ethics.

Accounting services. Approximately 90 percent of the firms surveyed reported that they used the services of an auditing firm for auditing and certifying of their financial statements. However, only about 40 percent used other types of services of an accounting firm. The study indicated that Iranian industrial enterprises made considerable use of satellite agencies, such as specialized and commercial banks, insurance companies, public accounting and auditing firms, and advertising agencies, as well as of loan and investment agencies, construction firms, employment agencies, computer services, management consulting firms, transportation agencies, and legal firms. Therefore, expanding Iranian industry had infused the creation and expansion of many satellite-type

services, industries, and businesses, each of which, in turn, required accounting skills.

Foreign influences. Foreign accounting procedures which influenced Iranian accounting came mainly from England, the United States, and France. By the mid-70s, there were approximately 150 to 200 British-trained chartered accountants in Iran; their influence, felt by older firms, affected the reporting and custodial aspects of accounting.

At this point, there were no more than five accountants with a U.S. CPA designation in the country. American-educated accountants were mainly those with an undergraduate degree in accounting or in business administration with a major in accounting. U.S. influence was felt primarily on industrial, managerial, and business advisory aspects of accountancy. This situation resulted in the dominance of British systems in official accounting firms and of American procedures in private industrial firms.

The French influence was mainly related to the technical effect of legal requirements on accounting practice. Therefore, differences of concepts and procedures existed among Iranian industrial concerns, depending on the origin of accounting techniques used, weakening the validity of decisions based on comparative analysis and the study of accounting statements of several different firms.

Modern accounting techniques were transferred into Iran more or less in pace with industrial development in the span of several decades, but modern accounting thought and economic orientation did not enjoy widespread recognition among professional accountants. Iranian companies with partial foreign ownership made better utilization of accounting information than companies with total Iranian ownership. Although the language barrier may be mentioned as a reason for this deficiency, cultural barriers were the strongest factor which made Iranian accounting tend more toward technical than thought orientation.

Implications of the Study

A combined analysis of the Iranian study indicated that the impact of the evolution of Iran's private industry on different functions of Iranian accounting was significant. Dramatic changes experienced in the internal and external environments of Iranian enterprise during the 1950s to the 70s had a significant impact on the nature of accounting information needed by various internal and external groups. These changes, in turn, led to changes in the various functions and aspects of accountancy in Iran, such as accounting education and

the accounting profession, and related elements, such as legislation, research, literature, practice, and so on.

According to the study, banks were originally the main importers of modern accounting to Iran, but as industry expanded, it became the influencing agent in the evolution of various functions and aspects of Iranian accounting.

The study revealed that Iranian industrial entrepreneurs and managers exhibited a considerable degree of perception of the role of accounting, but that all people in industrial activities did not share this perception. Accounting's role of fostering the capital market activities and mobilization of private savings was limited. An evolutionary trend from external reporting to internal reporting and management accounting as a response to expanding industrialization was also noted. Thus, while the evolution of private industrial enterprise led to increased perception of the role of accounting and consequently influenced accounting education and the profession as a whole, this perception was never sufficiently spread. Managers and accountants surveyed reported that industrial evolution, foreign accounting, and provisions of the Tax Law and Commercial Code were the most important factors in the evolution of accounting in Iran.

An examination of private industry's use of accounting services revealed that the swift industrialization had led to better and more use of services of both private and public accountants, but these services were not performed at their full potential; more diversified use of such elements as accounting advisory services was needed. Those accounting skills which were displayed were generally assessed as satisfactory only. In addition, a written set of professional accounting standards, a code of ethics, and principles were found not to exist.

Iranian industry, the major employer of accounting services, was seen to have been the major channel for the transfer of foreign accounting knowledge into precrisis Iran; this transfer had primarily influenced technique rather than the concept of Iranian accounting.

The final finding of the study revealed that industrial expansion had infused the creation of various satellite agencies, which in turn required services of the accounting profession. Among these agencies, lending institutions such as specialized banks like IMDBI were the most important since they not only needed and used accountancy, but they also became channels for the transfer and introduction of managerial accounting techniques to other agencies and sectors including industry.

On the basis of these findings, it was concluded that *private industrial development had been one of the important factors influencing the change and evolution of various functions and aspects of accounting in Iran.* This proved the first hypothesis. This study also proved that despite significant changes, accounting still had not performed its role efficiently and sufficiently in the economic development of Iran and so had much room for improvement.

ACCOUNTING EDUCATION AND THE PROFESSION IN IRAN (PRIOR TO SOCIAL CRISIS)

This part of the research evaluated the different aspects of Iranian accounting (education and the profession) to seek support for the second hypothesis of this study, that *vehicles introduced to meet, improve, and consolidate the required and needed changes in Iranian accounting had not been sufficiently effective.* Information used was based on interviews made possible by authorities of the schools which offered accounting as a subject or as a program or as a major, the schools' catalogs, the author's observations and experiences, as well as responses to parts 9 and 10 of the questionnaire.

In the early decades of the present century, no serious attention was given to formal and widespread accounting education in Iran. By the 1970s, however, accounting education was offered at the high school or vocational level, and at the college or university level.

Establishment of the Ministry of Sciences and Higher Education in 1968 provided impetus to the expansion of several badly needed fields of university education. One of these areas was business. By 1975, some twenty accounting and business-related institutions of higher education were in operation. Accounting was taught as a required subject in these institutions but was offered as a major subject in only a few of the schools. Almost all of the major programs were established as a result of the decades of rapid industrialization of the 50s and 60s. Professional management programs and seminars provided discussions of accounting from a management point of view, with a concept, rather than rule, orientation. An example is the annual Advanced Management Program of Tehran University's School of Public and Business Administration, a program offered for two one-month periods (one in Farsi and one in English) every summer for twenty years. Hundreds of Iranian and non-Iranian top-level managers participated in it.

Curricula and methods of instruction in the Iranian accounting schools were extremely technically oriented and normally lacked an

intellectual approach. The university-level education of accountants in Iran had been affected by the educational systems of several foreign countries. For example, the National Iranian Oil Company School (N.I.O.C.) is an example of practical training exemplifying British influence. Almost all accounting schools are examples of heavy emphasis on training in legal aspects of accounting exemplifying British methods. Moassesseh-i-Ali Hessabdari, Tehran University, and Melli University are examples of liberal university education and flexibility exemplifying the U.S. influence.

The curricula of accounting varied somewhat from school to school. The only generalization to be made was that the emphasis on mechanics, techniques, and forms of accounting was quite high, while emphasis on philosophical, theoretical, and functional aspects of accounting, especially with respect to the developing countries, was less than desired.

In general, the curricula could be considered desirable from the viewpoint of teaching the techniques, provided that good instruction was provided, of course. However, in some instances shortcomings included the lack of essential courses such as economic development theory, Iranian economic development, accounting philosophy and theory, the role of accounting in economic development, the social and behavioral aspects of accounting, accounting in advanced countries, research methodology, and accounting concepts. As a consequence of this technical and specialized approach, students were often prepared for an immediate desk job rather than for futuristic citizen life.

University teaching and research suffered from a lack of full-time staff, especially affecting the university education of accountants. Due to the busy business life of accounting educators, they were primarily concerned with accounting instruction only, with little or no attention given to research. Full-time accounting professors were few in number and seldom well qualified. Part-time instructors were more qualified, but they were almost always preoccupied with their outside business activities and did not devote much time to their teaching assignments.

There were few accounting textbooks in Farsi, the language of instruction in Iran. As an example, accounting-related books accounted for less than 0.3 percent of the 995 books published in the country in 1973.[7] There is no wonder that more than 90 percent of the individuals questioned in the author's survey believed that a sufficient amount

[7] Khosrow Karimi, *Nashrieh-i-Ketabshenassi* (*Bibliography Magazine*) (1974).

of literature in accounting did not exist in Farsi.[8] No real professional accounting periodical was published, there were very few scholarly accounting books in Farsi, and even translations were scarce.

Until 1979, only a handful (about sixty) of accounting and accounting-related textbooks existed in Farsi, almost all of which had been written in the span of Iran's rapid industrialization. With few exceptions, most of this literature tended to make hard and fast rules of some points and concepts which are not completely accepted everywhere in the world. Furthermore, these books were primarily technically oriented rather than concept-oriented.

Three other major shortcomings of accounting textbooks in Farsi should be mentioned here. First, they were not sufficiently diverse to cover all of the modern managerial and control areas of accounting knowledge. Second, they were hardly adequate for the needs of a high-quality graduate program in accounting. Finally, they lacked a specific Iranian orientation and flavor.

The weakest aspect of accounting education in Iran was research. There was virtually no real research work in this field in Farsi, and aside from one or two short studies and reports in English, no author had written anything on Iranian accounting in that language either. This could be attributed to the historical absence of an inviting, suitable, and stimulating environment for accounting research.

Libraries in colleges and schools where accounting was taught were primarily understocked in regard to accounting literature. However, since most of the periodicals and books on the libraries' shelves were in English, even the low stock of accounting literature was not utilized to its fullest potentials.

A study by the International Education Activities Association of Collegiate Registrars and Admissions Officers in 1970 recommended that graduates of Iranian accounting programs such as N.I.O.C.'s Institute and the Institute of Advanced Accounting were suited for graduate studies. However, the study noted that these graduates were probably more suited for further work in programs of applied accounting rather than for graduate study in business administration.[9] This reflects the technical rather than conceptual orientation of the accounting education. Many practicing accountants and managers who

[8] From the questionnaire which included the item "Do you think that we have sufficient literature of accounting in Farsi?"

[9] Joel B. Slocum, *A Study of the Educational System of Iran and Guide to the Academic Placement of Students from Iran in United States Educational Institutions* (New York: World Education Series, 1970), pp. 91-93.

participated in the author's study also viewed Iranian accounting with a narrow perspective, emphasizing the expeditious preparation of accountants for immediate productivity and the curtailing of philosophical and liberal education. The same narrow perspective was also reflected in the graduate programs of accounting, of which only two existed in the country.

The private sector employed many university-educated accountants, most of whom had received their education in Iran. Due to its economic and profit-incentive orientation, the private sector's reactions and views can normally be used as an immediate test of the quality of accounting education in the country. When asked if they were satisfied with services of the locally educated accountants, 60 percent of respondents answered "yes," 10 percent answered "no," and the remainder gave answers such as "to some extent," or "yes and no."

In comparing the locally trained and educated accountants with those educated abroad, 30 percent did not respond, 30 percent believed that foreign-trained accountants were better than those trained locally, 10 percent believed that the locally trained accountants were better, 20 percent believed that the two groups were equal, and 10 percent expressed views such as "The foreign-trained accountants are better as far as systems and principles are concerned, Iranian educated accountants are better as far as Iranian laws and regulations are concerned."

In answering "How would you rate Iranian accounting and business colleges and schools and their graduates? . . . " 30 percent answered "good," from a range of excellent, very good, good, satisfactory, and poor. Forty percent answered "satisfactory," 20 percent answered "poor," and 10 percent did not answer.

In short, this part of the research revealed the following:

1. University accounting education was very young in precrisis Iran and had expanded during the 60s and 70s in response to private industrial development.
2. In general, accounting education was considered by informed individuals to be satisfactory only.
3. This was attributed to its technical orientation, lack of a sufficient number of full-time and devoted academicians, poor and insufficient textbooks, understocked and underutilized libraries, and so on.
4. The weakest aspect of Iranian accounting was research, mainly due to an uninviting environment.

On the basis of these findings, it was concluded that Iranian ac-

counting education had taken a major and fast step to meet the needs of the emerging Iranian economy and industry. However, due to the rapid nature of Iranian socioeconomic evolutionary patterns, and due to the shortcomings in the educational programs, *accounting education had not been fully successful in setting the pattern of accounting thought in the country.*

The industrial developments in Iran occurred rapidly. Meanwhile, the development of the accounting profession, which should have been one of the important ingredients in this industrialization trend, was missing in a real sense.

Professional accounting societies made little contribution to Iranian accounting. One of the main reasons was that the relatively small number of professionally trained accountants never had enough time and professional interest to pursue seriously the idea of establishing professional accounting associations and societies. Consequently, no valuable independent professional achievements similar to those performed at the instigation of the American Institute of Certified Public Accountants or the British Institute of Chartered Accountants were experienced in Iran.

The first attempt to establish a professional accounting association was made in 1944 when eight Iranian chartered accountants (then in England) met and prepared and signed a potential articles of association for the establishment of an accountants' association (Anjomane Hessābdārān). However, although practically all of the founding members returned to Iran, the association was never formally established, since they all became busy with their careers.

Concurrent with the passing of the Income Tax Act of 1967, which provided for services of official accountants, the idea of creating a professional body was renewed, but no real accounting association was formed.

Although the 1970 amendment to the Tax Law provided for the formation of an auditors' association, the 1973 amendment to the law provided for an Institute of Certified (Official) Accountants to be formed as an adjunct of the Ministry of Finance. This weakened the issue of a legalized and yet *independent* body of professional accountants.

The dilemma resulted in the establishment of two professional bodies in 1974, one with a tax orientation under the title Kānoone Hessābdārāne Rassmie Iran (Iran Official Accountants' Institute) in accordance with Article 275 of the 1967 Income Tax Law and its

subsequent 1973 amendment, and the other with a professional orientation organized by a group of independent and nonpolitical professional accountants called Anjomane Hessābdārāne Khebre Iran (Iran Chartered Accountants' Association) of which the author was a member. Both bodies accepted members on the basis of professional examinations, work experience, and other professional requirements.

The two statutory laws of the Commercial Code and the Tax Law basically governed Iranian accounting. These laws stipulated the number and form of accounting books, and their uses. Consequently, Iranian accounting had in practice followed the stipulations of the law, which promoted a rules approach to accounting, normally to the detriment of appreciating the economic basis of business transactions, a necessity for meaningful internal reporting. Emphasis on forms and uniformity thus prevented the emergence of healthy professionalism in the accounting legislation.

The evolution of public accounting was largely influenced by a few foreign accounting firms which established branches in Iran for public practice, such as Coopers & Lybrand; Whinney, Murray (an affiliate of Whinney, Murray of Britain and Ernst and Ernst of the United States); and Price Waterhouse. Foreign accounting firms performed many kinds of public accounting services, but initially they were engaged in serving the auditing and reporting needs of various oil companies which were active in Iran through the Oil Consortium (established in 1954). These firms specifically influenced Iranian accountancy in several ways, mainly by spreading foreign-oriented financial reporting and auditing techniques through the performance of consulting jobs, setting accounting systems, and advising local industrial units on financial management procedures and patterns, and by training their Iranian auditing staff. They stimulated local interest in the services of the public accounting profession and its activities as a result of which many public and private business and industrial firms learned to use services of public accountants, and several Iranian public accounting firms were gradually established in the country.

The contribution of the Iranian accounting profession to accounting research and literature was slight. Only two accounting periodicals were issued in Iran, and they were not of high quality. The bulk of the limited literature was mostly textbooks. A few other pieces of work by accounting firms were primarily for the benefit of their clientele and did not have widespread use.

Iranian and foreign accounting firms contributed to the educational aspect of accountancy by training their own junior auditing trainees,

as well as influencing their customers' accounting systems and procedures. Furthermore, a majority of good (but part-time) accounting instructors were also public (official) accountants. Aside from these indirect but useful contributions, no significant direct contributions to accounting education were made by the Iranian accounting profession.

On the basis of the research, it was concluded that the Iranian accounting profession had progressed toward meeting the requirements of the expanding industrial sector, but due to the absence of appropriate regulatory bodies, it suffered from deficient organization, legislation, and scholarly accounting publications, and from inadequate public confidence, respect, and recognition.

Conclusion to the Iranian Research

Based on the findings of the Iranian research explained in the first part of this article, it was concluded that "private industrial development was one of the important factors influencing the change and evolution of accounting education and profession in Iran," and the "vehicles introduced to meet, improve, and consolidate the above-mentioned industry-inspired and required changes in the Iranian accountancy were not sufficiently effective." These conclusions proved both the first and the second hypotheses of this research. Major reasons for these shortcomings were later analyzed and recommendations for improving the condition of Iranian accounting were set forth.

ACCOUNTING IN DEVELOPING COUNTRIES

The Committee on Accounting in Developing Countries of the AAA used the Modified Delphi Technique in their 1973-75 research.[10] Two questionnaires were utilized; the second was based on the responses to the first. The first questionnaire was mailed to approximately 250 experts around the world of whom 62 participated in the study. Replies were from twenty-three countries and three world organizations.

The participants' opinions revealed more than ninety separate problems which were analyzed and clustered into twenty-six primary problems consisting of fourteen accounting practice problems and twelve accounting education problems. Forty-five experts provided usable responses to the second questionnaire. The following list indicates the findings of this study with regard to the extremely important

[10] See Norman C. Dalkey, *Delphi* (Santa Monica, Calif.: The Rand Corporation, 1967), p. 3704.

practice and educational problems of accounting in developing countries.[11]

Practice

1. There is a shortage of qualified accountants at all levels.
2. Accounting information is either not available or is not available in the proper form, or is received too late.
3. Accounting data is not adequately utilized for internal management purposes.
4. There is a lack of legislation relating to accounting and auditing standards and procedures.
5. A strong national association of accountants is lacking.
6. Adequate accounting in government is not present.

Education

1. Locally authored accounting textbooks are inadequate.
2. Teaching of accounting subjects at the college level is inadequate.
3. Qualified accounting instructors are lacking.
4. Professional development opportunities for accounting educators and practitioners are lacking.
5. Accounting education for managers is inadequate.

The problem of lack of qualified instructors at the college level was "first among the equals" in that 71 percent of the responses ranked it as "Extremely Important."[12]

It is important to recognize that professional and educational problems of accounting in developing countries were found to be related and many of the causes affecting the professional problems were found to relate to the accounting education and its inadequacies. Therefore, it was concluded that any effort to improve accounting education in these countries could help to solve or minimize the professional problems.

THE INTERNATIONAL ACCOUNTING STUDY

In *Eighty-Eight International Accounting Problems in Rank Order of Importance,* George Scott and P. Troberg present their Delphi study which they claim to be the first comprehensive and systematic analysis of international accounting problems.[13] A group of forty-one international experts participated in the final phase of this study known as the Round Three Questionnaire.

[11] Scott, "Accounting in Developing Countries," pp. 204-50.
[12] Ibid., p. 202.
[13] Scott and Troberg, *Eighty-Eight International Accounting Problems,* p. 3.

The major achievements of this study include the fact that eighty-eight more-or-less separate international accounting problems were identified, placed into nine logical categories, and ranked; and that the lack of adequately trained accounting educators in many countries was ranked as one of the two most important international accounting problems. The other most important problem was the difficulty of measuring the economic effect on a company of changing exchange rates.

The findings of this study are summarized below.[14]

Categories of Problems	*Rank*
Exchange rate and translation problems	1
Lack of adequate qualified accounting educators	1
International accounting standards	2
International auditing problems	3
Accounting disclosure problems	3
Accounting for inflation in international operations	4
Internal performance evaluation in international operations	5
International information and control systems problems	6
International tax accounting problems	7

COMPARISON OF RESULTS OF THE THREE STUDIES

A comparison of the results of the three studies discussed here reflects numerous similarities. It is interesting to note that the first two studies were performed independently of each other during the same period of time and reported extremely similar results.

Lack of Sufficient Familiarity of Managers with the Role and Importance of Accounting

One of the findings of the Iranian study was that the internal role of accounting in private industry centered around the measurement of historical costs and included few analytical functions. The international accounting study, on the other hand, ranked internal performance evaluation problems and internal information control systems problems as problems of ranks 5 and 6, respectively. A similar finding in the study on developing countries explained one of the major (extreme) problems of accounting in those countries to be "failure to utilize accounting information adequately for internal management purposes." Reasons for this problem were believed to be that managers lack general training and education concerning the nature and role of accounting information for managerial functions, and accounting reports are not adequate for use by management.

Another finding of the research in developing countries in this

[14] Ibid., p. 18.

regard was that accounting information is either not available or is not available in the proper form, or is received too late. Major causes for this problem were analyzed to be that educational training lacks the emphasis on managerial accounting and on developing accounting systems, and accounting information systems are poorly organized and underdeveloped for managerial purposes.

Similar causes for this problem were found in the Iranian study, such as the facts that managers in private Iranian industry were not fully aware of and familiar with the methods of utilization of accounting data; only a minority of top managers had received formal accounting education; accounting had not been used to its potential in Iran; accounting skills did not exist in Iran to a sufficient level; accounting education in Iran was inadequate; and accounting reports prepared in Iran were primarily past rather than future oriented.

Therefore, it could be said that lack of interaction between accounting information and managerial decision making both in Iran and at the international level could be attributed to two major causes: inadequacy of accounting data for managerial decision-making needs, and insufficient familiarity of managers with accounting and its role. *Both of these causes are rooted in the educational system.*

The Iranian study showed that the educational curricula of accounting and methods of teaching were technically oriented without sufficient conceptual and philosophical orientation. The study of accounting in developing countries also indicated the "inadequate teaching of the accounting subjects at the college level" to be a serious problem. The major cause given for this problem was that there were not a sufficient number of qualified full-time accounting educators since "accounting instructors often occupy several other positions in companies, government and public accounting firms for the purpose of supplementing their low teaching salaries and they do not have time for adequate class preparation."[15]

In the Iranian study, the facts that accounting instructors held several jobs, received low salaries, and were part-time instructors were cited among the important factors in the poor accounting programs. In the international accounting study, this problem was ranked as the number one problem.[16] In the study of developing countries, "lack of qualified accounting instructors at the college level" was an extremely important educational problem and a major cause mentioned for it was "inadequate financial rewards for college teaching."

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[15] Scott, "Accounting in Developing Countries," p. 205.
[16] Ibid., p. 18.

In the Iranian study, the lack of sufficient locally authored or translated accounting textbooks in Farsi, the extreme technical orientation of the few then existing books, and the absence of research in the field of accounting were found to be among the important educational problems. This was also reported for developing countries. The cause for this was believed to be that the accountants most qualified to write texts were too busy with other concerns.[17] In Iran, in addition to this reason, the lack of research facilities and the absence of an encouraging environment for translation and writing were also cited as causes.

One of the major findings of the Iranian research was that the accounting profession lacked a set of generally accepted accounting principles and a well-understood code of accounting standards and professional ethics, and that the emphasis of the Iranian Commercial Code and the Tax Law on form and technique rather than meaning and concept had deterred the evolution and progress of such standards and principles. In the international study, international accounting standards and international auditing problems were ranked second and third, respectively.

In developing countries, "lack of legislation relating to accounting and auditing standards and procedures" was believed to be an extremely important problem, with its major cause that "the accounting profession has not been united and forceful in developing and enforcing reporting and auditing standards beyond the legal minimum." The Iranian research showed exactly the same cause for the problem relating to standards and principles.

An important problem found in the Iranian accounting development was that the accounting profession was not organized in a united, independent, and diversified system, and that the duality within the accounting community prevented it from development and growth. The study of developing countries also showed that "lack of strong national association of accountants" was an extremely important problem in developing countries.

Results

An overview of the explanations and comparisons discussed here shows that the three studies reflect the fact that the most important problem of accounting at the national and international level, especially for developing countries, related to the *educational aspect of accounting*, involving lack of qualified instructors, good textbooks, and research. The major causes for the insufficient familiarity with the role and im-

[17] Ibid., p. 205.

portance of accounting by managers is educational. And, although absence of standards and development of an independent profession is related to the profession itself, a healthy and strong profession is normally an outcome of good accounting education.

THE SITUATION OF ACCOUNTING IN IRAN AFTER THE REVOLUTION

In 1977, Looney wrote:

> Our analysis of the Iranian economy indicates that during the remaining quarter-century, Iran will almost certainly have the resources to allow her to grow at a rate of at least 10 percent per annum — this rate would result in a doubling of GNP every seven years. . . .[18]

Not only did this forecast not materialize, but due to the socioeconomic-political changes of 1978-79, the economy of Iran was also altered by procedural and ideological changes and environmental disorder.

The closing of many industries and the confiscation of a large number of private-sector industrial enterprises caused considerable change in both the functions and roles of accountants and in the nature and amount of private enterprise accounting data and services needed by the new groups and agencies, such as the revolutionary committees and the government. These changes, naturally, affected accounting education and the profession.

Two writers on the Iranian environmental conditions have analyzed well the situation of Iran in recent years.[19] Looney wrote in 1977:

> Oil revenues have become a mixed blessing for Iran. On the one hand, they are the main determinant of the rate of expansion of the economy . . . and on the other, they are capable of producing double-digit inflation, a deterioration in the urban-rural income distribution, and undesirable concentrations of individual wealth.[20]

Johnson wrote in 1980:

> Under the pressures of rapid industrialization in Iran, chronic imbalances were aggravated . . . . Ambitious modernization plans were attempted without little change in the elitist social order . . . . The strategy of rapid industrialization led to growing dependence on foreign technology and expertise and exaggerated income inequality and created unbalanced growth.[21]

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[18] Robert E. Looney, *Iran at the End of the Century* (Lexington, Mass.: Lexington Books, 1977), p. 137.

[19] Ibid., and Gail Cook Johnson, *High-Level Manpower in Iran, From Hidden Conflict to Crisis* (New York: Praeger Special Studies, 1980), p. 103.

[20] Looney, *Iran,* p. 991.

[21] Johnson, *Manpower in Iran,* p. 95.

Just before 1977, oil revenues dropped sharply, which meant that there was a slower rate of economic growth; the government was then faced with the task of "convincing a skeptical populace" that high expectations must be lowered. In short, "... development plans were very unbalanced and were thereby doomed for failure." And all this "... spawned social rather than industrial revolution ..." and "left the established order vulnerable to instability." Within the private sector, "the ad hoc nature of government policy ... fostered such strong feelings of insecurity ... that entrepreneurs ... were only willing to commit themselves to short-run risk taking and quick profit." By then, "... the three key groups of government, employers, and manpower were caught in a situation of negative reinforcement that undermined the formation of unified commitment to the development goals and encouraged the disintegration of the industrial order."[22]

As the new government took control, the economic situation of the country worsened and industries suffered sharp financial and personnel losses. Foreign technicians and experts, as well as top management and entrepreneurs left the country or were discharged and valuable facilities were lost through theft and confiscation. Universities were closed.

In the first nine months of the Iranian year 1959 (1980/81), Iran's exports dropped sharply while imports increased by 25 percent.[23] According to statistics of the World Bank, in the last year prior to the revolution, non-oil exports of Iran amounted to $600 million of which $200 million were for industrial products, the balance of which was for food and handicrafts. This amount dropped to $140 million in 1979, and was forced below $100 million in 1980. Exports of products such as cotton and woolen fabrics, yarns, canned food, chemical gases, pharmaceuticals and other chemical products, soap and detergents, aluminum, and electric bulbs reached zero. Presently, these products are even scarce inside the country for local consumption.[24]

Although economic issues took second place to political issues after the revolution, some economic programs were announced within the first six months after the takeover. For example, the economic program issued in 1979 called for abolishing all interest, nationalization of all banks, cancelling all international debt owed by Iran, establishing workers' committees to run all public enterprises, introducing high

[22] Ibid., p. 97.
[23] *Iran Times*, 23 January 1981.
[24] Ibid.

taxes on imported industrial goods, redistribution of wealth, and a new land reform.[25] Thus,

> Banks, insurance, and a number of industrial enterprises were nationalized in June and July 1979. In December all banks were amalgamated into eight national banks.... These banks, it was announced, would no longer charge interest on loans, but only a fixed four percent fee.[26]

By the end of 1980, the overall picture of the economy was described by Bani-Sadr, the country's president, as follows:[27]

1. Reduction and slowdown in the pace of economic growth and decline in industrial added value.
2. Unemployment in industry and service areas.[28]
3. High inflation and potential of even higher inflation.
4. Withdrawal of deposits from the banking system due to lack of trust in banks.[29]
5. Declaration of bankruptcy for many banks, so they were merged.
6. Reduction in imports of necessary products and raw materials due to economic sanctions and the incompetency of the ministers of economy and commerce.
7. Loss of foreign credit of the banking system and confusion in the foreign-exchange market.
8. Reduction in the free foreign-exchange reserves due to decline in the oil exports.
9. Confusion in agricultural economics due to a lack of government and the absence of specific applicable laws.
10. Existence of problems in the industrial sector due to insufficient raw materials and other necessary resources.
11. Complete or partial stagnation in the service-oriented sector.
12. Complete stop in the construction industry due to legal confusion and the insufficient supply of construction materials.
13. Absence of a definite country-wide economic and social development program.
14. Stagnation in economic activities and the money market.
15. Low supply of essential commodities such as meat and wheat.

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[25] Michael M. J. Fischer, *Iran* (Cambridge: Harvard University Press, 1980), pp. 223-24.
[26] Ibid.
[27] Abol-Hassan Bani-Sadr, *Enghelabe Islami* (Tehran) quoted in *Iran Times*, 16 January 1981, p. 7 (translated from Farsi).
[28] With a population of 37 million in Iran, 5 million of the 14 million manpower community is believed to be unemployed according to *Iran Times*, 16 January 1981.
[29] Nonpayment of interest should be added to this reason according to this author.

16. Absence of legal security.
17. Weakness of management and managerial services and disappearance of managerial power and authority.
18. Lack of harmony and existence of conflict in most areas.
19. Nonimplementation of laws and regulations.
20. High demand and high consumption for food and other consumer goods.

These economic and industrial changes greatly confused the situation of accounting in the country. For example, large-scale industrial and commercial enterprises and a considerable number of smaller firms were confiscated and nationalized by the new government. Throughout the confiscation process, former owners, managers, and accountants of these firms were questioned by various agencies and revolutionary committees regarding previous foreign exchange transactions, money sent abroad, salaries and bonuses paid to specific individuals, contracts and other major transactions with specific contractors and suppliers of goods and services, information with regard to creditors and debtors for the past ten years, bribes and gifts paid to various individuals or received by company managers and owners, types of investments inside the country and abroad (by the company or by its major shareholders), interest-bearing transactions, distribution of company resources among different types of activities, and so on.

Although most of these questions were accounting oriented, much information thus required was either not readily available or was almost impossible to obtain, because the accounting system of the firm had not necessarily been arranged in such a way to supply the data requested.

Also, decision making in companies is now different than in the past, that is, a profit-making industry which needed accounting for expansion and profit and dividend distribution purposes now needs accounting information to enable it to make decisions for present survival.

As new groups assumed power, the Iranian accounting profession faced difficulties, immediately affecting the external and internal problems of the profession. Partners of accounting firms which had normally managed their organizations were faced with the internal problem of demands from juniors, assistants, and nonprofessional employees to form their own revolutionary committees to run the firms. As a result, some firms were closed and others faced tremendous organizational and managerial problems and changes.

The immediate external pressure was the continuous demand by the new authorities that the accounting firms provide various information which was either nonexistent or could not be supplied concerning the confiscated and nationalized industries which had been their former clients. Furthermore, the issue of giving information regarding former clients and possibly creating dangerous situations for them became an important professional dilemma.

The short-run effect on the accounting profession is the fact that it has constantly faced the Islamization process which can affect the economic and financial laws of the country, resulting in regulations and methods with which the professional accountants are not fully acquainted and which can have a considerable effect on the nature of the work to be performed by accountants.

Accounting professional bodies have also faced changes. The private accounting association lost many of its members who either left the country or lost their incentive and enthusiasm to remain a member.

Although Islam does not prohibit ownership and proprietorship, the Tehran Stock Exchange, a major center of accounting professional activities, is practically closed due to confusion, nationalization of its member corporations, economic stagnation, absence of clear regulations and of public interest in investment, and the fact that it was a Western-type institution.

Basics of Islamic economic laws were interpreted by the new authorities as follows:[30]

1. Interest is forbidden.
2. Three types of economic transactions are permissible: bailment of capital, contract of farm letting, and contract of irrigation. Major laws concerning these forms of limited partnerships stipulate that profit is to be divided between the owner of the capital and the worker, loss does not apply to labor, only the investor bears the burden of loss, and the labor contractor cannot employ subcontractors at lower rates.
3. Rental of equipment, building, vehicles, and the like is permitted. However, rental of labor (employment) is undesirable.
4. The principle of free will applies to all transactions, provided the transaction does not include a term which is forbidden by the religious laws.

Thus, theoretically, capital has fewer privileges than labor since it cannot receive a fixed share of profit (interest) as can labor (no-risk

[30] Musa Sadr, *Economics in the School of Islam* (Tehran: Jahan-Ara Publishing Co., 1977), pp. 77-100.

wage and profit sharing). A fixed share on capital is interest which is forbidden. However, capital can participate in profit and loss of a productive project. Equipment receives only rent (a fixed share), but cannot participate in profit.

To summarize, the order of importance given to the elements of production is as follows: (1) labor with three privileges: wage, profit sharing, no loss; (2) capital with one privilege: profit sharing. It also bears the loss burden; and (3) equipment with one privilege: rent.

Following is a comparison of Islamic laws pertaining to the factors of production as compared with communism and capitalism:

Factors of production	*Islam*	*Communism*	*Capitalism*
Labor	Wage Profit sharing No loss sharing	Wage Profit and loss sharing	Wage —
Capital	Profit and loss sharing	Interest	Interest Profit and loss
Equipment	Rent	Rent	Rent

Another interpretation of Islamic laws relates to government property. The clergy have issued a religious decree that all property belongs to the government, which conflicts with the Islamic consideration for ownership.

One of the major issues in the Islamization of banks and of all financial and economic transactions is the issue of interest. Industrial loans and home mortgages, as well as all long-run business transactions, previously bore interest, but new government ideology prohibits interest.

The idea behind the prohibition of usury is that this benefits the community. Thus, personal morality will supposedly regulate the relationship between individual rights and the good of the community. Unfortunately, this does not normally happen, and the prohibition of interest results in the use of "hileh'i Shar'i" or "kulah'i Shar'i" (lawful deceits) or "mehrabani" (kindness) in calculating interest as if it were something else.[31]

The Islamic-Arabic term for interest is "riba." Even though many believe that riba is excessive and unjustified interest, others believe

[31] "Hiyal-i or Kulah-i-Shar'i techniques tend to be of the form: I lend you $10 plus a match and you return to me the 'equivalent' amount of $15 . . . Mirabani technique tends to be of the form: I lend you $10, you return to me $10 and voluntarily add a gift of $5 as a token of appreciation." From Fischer, *Iran* p. 278.

that all interest is riba. A practical debate on this issue occurred in 1975 in regard to the Islamic banks which were established in many Iranian towns by the clergy and merchants as a charity operation (lending for small needs, maximum of $375 for fifteen months). The borrower repaid only the amount borrowed. Theoretically there are only two forms of transactions that an Islamic bank conducts, noninterest lending (charity loans)[32] and business loans on a partnership basis in which the bank supplies capital for a share of the return of the venture, a share of the profit, or all of the loss.[33]

In practice, while Islamic bank loans were only charity, the banks continued to exist on the kindness of the rich merchants who made their money in modern economic life, contributed a small amount to the Islamic bank, and did not expect it to be returned. After the revolution, abolition of interest in all banks proved unsuccessful since people withdrew their savings. As a result, the government prohibited banks from receiving or paying interest, and then changed the decree to permit banks to accept and pay a gift.

Another issue which must be mentioned here is religious taxation. There are two kinds of religious tax in Islam, *Khoms* and *Zakat*. One-fifth of the individual's income which must be paid to the poor, Khoms must be divided into two halves, one of which goes to poor and orphan relatives of the prophet Mohammad and the other to the Imam or the religious leader for religious purposes.

Zakat is a religious tax on grain, dates, raisins, gold, silver, camels, cows, and sheep after these assets reach a maximum limit. A religious representative collects the Zakat and spends it for the community of Islam.

In addition to these taxes, the government may legislate new taxes and rationalize their Islamic basis through a religious decree. For example, in late 1980 the Ministry of Finance announced new tax resources to be recognized and used to cover the decrease in the country's tax income resulting from damages to economic concerns in the Iran-Iraq war area. Examples are the new tax on vehicles and the increase in inheritance and several other taxes.

The changes brought by the 1978-79 crisis severely changed accounting education. The Islamic revolutionary committees were formed in schools, such as schools of business and accountancy, and helped student militants to control all administrative, personnel, and professional activities of the departments and schools.

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[32] "Gharzolhassaneh."

[33] Fischer, *Iran*, p. 158.

In a move to consolidate business schools, the head of the Business Education Section of the Ministry of Higher Education announced that three of the eleven universities with business curricula had been closed and that the other eight would be consolidated into four institutions.[34] Almost twenty percent of the nation's university teachers were fired in the government's purges. Of 11,000 professors and lecturers before the closing of the universities in 1980, 1,000 have already been dismissed and another 500 are scheduled for dismissal.[35]

Accounting programs have been especially affected by being added to other disciplines. The Accounting Department of the School of Business and Public Administration of the University of Tehran has been included in the Department of Economics of the School of Law, with the purpose of Islamizing accounting and financial-related education.

Fischer explains that the cultural revolution's approach to education is to "turn every single school in Iran into a religious 'madrasa' which will supply the teachers, notaries, judges, lawyers, scientists, . . . "[36] As an example of the new ideology, the Minister of Education has declared that it is a waste of resources to spend money abroad for the education of Iranian students. In December 1980, the government stopped issuing exit permits to students willing to study abroad. In addition, the Ministry of Higher Education announced in late 1980 that no educational institution will be allowed to use a foreign language as its medium of instruction.[37] The three universities closed had used English as their medium of instruction.

Asked how the country planned to fill the vacancies left by the purges, Farsi, a leader of the Islamic Republic Party and a member of the Cultural Revolution Committee, replied that foreign professors would be hired and that students living abroad would be asked to return home to take university positions.[38] These comments are in conflict with the decision of the Ministry of Higher Education not to allow foreign languages to be used as a medium of instruction (foreign professors whom Farsi advocates for employment do not speak Farsi), and the comments of the Minister of Education that money should not be spent for educating students abroad.

Also affecting the accounting curricula are the new financial and

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[34] *Iran Times,* 23 January 1981.
[35] Ibid.
[36] Fischer, *Iran.*
[37] *Iran Times,* 23 January 1981.
[38] Ibid.

accounting rules and laws. In short, accounting education has been affected both by the general new approach toward education and a special reaction against its very nature, that is, the relationships between finance and money.

CONCLUSIONS AND RECOMMENDATIONS

This article has reported the situation of accounting in Iran before the 1978-79 crisis, has compared the findings of the author's study with those of two other studies on accounting in developing countries and on international accounting problems, and has examined the situation of accounting in Iran after the 1978-79 crisis. The purpose of this article is to bring to the attention of interested accounting scholars and practitioners the economic, legislative, and industrial conditions of accounting before and after social changes in a developing country such as Iran. It is hoped that this article will provide some insight for those accountants who have some relationship to accountancy in developing countries which are experiencing or will experience evolution and changes similar to those in Iran.

An examination of the functions of accounting in the pre-revolutionary Iran revealed that private industrial development had been one of the important influences for change in accounting education and the profession. However, the study of various aspects of accounting showed that accounting vehicles introduced to meet industry-inspired changes were not sufficiently effective. In fact, it was concluded that accounting education had not been fully geared to the country's industrial evolution, and that the accounting profession was still in the early processes of formation without the recognition it deserved.

The study by the Committee on Accounting in Developing Countries of the American Accounting Association indicated that most of the major problems of accounting in developing countries relate to accounting education. The international study ranked the lack of adequately-trained accounting educators in many countries as one of the two most important international accounting problems.

A comparison of the three studies reflected many similarities in the findings of the three projects and emphasized the fact that the most important problem was related to accounting education and the fact that education was not fully geared to other developments in the respective countries.

Broadly speaking, there were three main factors which both promoted and handicapped Iranian accounting in the pre-revolutionary

stage. These three factors were tradition, legislation, and swift industrialization or, in other words, imbalanced growth.

In Iran, tradition was a major factor in the reluctance to accept new managerial and accounting ideas. The manner in which a culture develops affects all the traditions and manifestations of life in that culture, including accounting traditions. As Fantl said, "Tradition yields a powerful influence in shaping not only the opinions of the people but also the more concrete rules governing their business practices."[39]

These practices influence the accounting procedures as well as its role and status in the country. For example, the Iranian elite adversely affected the development of accounting by controlling the country's wealth, fortune, and markets. High profits gained by this group left it with no incentive, or very little, to administer cost reducing and production control techniques in which accounting plays an important role. This attitude certainly did not foster accounting knowledge.

Another traditional factor which hampered development of accounting was the accounting of full secrecy (rather than full disclosure), which stems from pessimism inherent in the Iranian culture.

A famous Iranian poem says "Since there are many devils in the guise of men, One should not give one's hand into every hand," explaining the underlying basis for the accounting environment. To the private industrial entrepreneur, everyone was a possible devil in the guise of man — not only the tax official, but also the stockbroker, the banker, the fellow industrialist, the customer, the competitor, the loan officer, and even the independent auditor, or the graduate student who went to his office for an interview or for filling out a research questionnaire. Therefore, people would neither divulge their best kept secrets (accounting information), nor would they believe data provided by others.

There were several reasons behind nondisclosure and concealment, such as fooling the tax collector, keeping shareholders uninformed, attracting potential reliable close shareholders, and keeping outsiders ignorant, thus making appraisal of the management an impossible task. But this was dangerous for management itself. The absence of accounting information needed as a management tool to improve performance fooled managers and led to their nonoptimal decision making, and deprived companies of better and more desirable possibilities.

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[39] Irving L. Fantl, "The Case Against International Uniformity," *Management Accounting* (May 1971): 13-16.

Another point regarding tradition's effect on Iranian accountancy related to investment traditions. The existence of a well-established capital market with ample economic transactions has been a major factor in the development of accountancy in many countries. However, Iran did not have an expanded capital market due to several factors which traditionally affected the investment decision made by the average person. One is reliability, another is safety against the fall in the purchasing power of money, and a third is the income-earning power of the investment. For example, the hoarding of gold, jewelry, and carpets (and sometimes rural cultivated land), for many years formed the major type of saving in Iran. Because these investments did not involve a second person (such as a majority stockholder or a manager) on whom one could hardly rely, they were a safe hedge against inflation. Interest later shifted considerably to investment in real estate, due to rising urban land prices enabling many people to earn windfall gains. Real estate not only had the reliability and safety characteristics of gold and carpets, but it also produced substantial surplus value and had significant income earning power.

A shift in the investment tendency therefore required measures to fit the Iranian investment characteristics and mentality. Corporate stocks could be at least a partial hedge against the fall in the purchasing power of money, but their income-earning powers were not relied upon and acknowledged by the average investor who believed that there were many devils in the society in the guise of men and that owners, managers, and entrepreneurs all were devils. Therefore, he did not trust these people unless he somehow gained confidence in the internal affairs of their corporations. Thus tradition hindered progress in Iran.

The legal structure of a country also reflects its traditions. Once traditional customs are crystalized into laws, their execution and control become the duty of government. Naturally, in an environment of suspicion and insecurity, every person tries to appear to conform to the laws and legislation to prove his innocence, but this conformity is framed within the rigidity of routine procedures and forms, rather than philosophy and judgment. This, in fact, was the biggest barrier to the advancement of managerial philosophical accounting. Understanding principles and the application of initiative and judgment are, of course, crucial for the successful development of any accounting system. Rigid legislation can halt this as it did in Iran.

Despite traditional and legislative hindrances and influences, various aspects of accounting constantly moved forward, but due to the

swift pattern of industrialization and imbalanced growth, this progress was relatively slow, unbalanced, and unplanned. In fact, accountants followed the easy solution to the problem of the changing demands of a fast-growing industrialization. They either neglected the changes and simply continued the old, inefficient, and improper methods, or copied and imitated the techniques and methods used in developed countries without applying the issue to the time or place. No doubt the transfer of technology from developed countries was helpful for Iran's economic advancement and industrial progress. However, for several reasons, the complete imitation of their social, economic, industrial, and accounting policies, techniques, and institutions, resulted in problems.

Advanced countries had invented technology and developed accounting systems and techniques step by step, in line with industrialization, while these systems have been available to the developing countries, such as precrisis Iran, in one package. The political, social, and cultural conditions in Iran differed from those found in the developed countries when these techniques and systems were begun. The kinds of problems existing in developing countries are different from those that the pioneer countries faced. Further, the type of relationship prevailing between developing countries and advanced countries did not exist for the pioneer countries. The delay in development tends to cause obstacles and allows time for social tension to develop, a problem which did not exist for the pioneer countries.

Countries, such as Iran of the 1950s, 60s, and 70s, must carry a heavier burden for their industrialization than did pioneer countries, because they must undergo heavier initial investments, calling for immediate and more careful and serious application of appropriate accounting.

Finally, unlike pioneer countries in their industrialization stage, developing countries enjoy the existence of a previously developed market, which also calls for special and proper accounting theory and practice. Nor could Iranian accounting have developed in isolation. As was demonstrated before, Iranian accounting had, in fact, been greatly influenced by foreign accountancy. However, particular aspects of the advanced countries' accounting were not fully suitable in the Iranian environment. For example, the legislative requirements of French accounting centered on enforced uniform accounting and required that business accounting conform to tax accounting and other relevant regulations. A result of this approach in Iran was that ineffective regulations and the rigid treatment of accounting led to the

purely technical, nonconceptual, form-rather-than-content oriented and tax-dependent nature of accountancy. This uniformity did not even provide comparability of financial statements.

For its development, Iran needed more and more risk capital without which funds were often obtained from banks. In early 70s, the public was encouraged to invest its sterile savings in industrial and development projects. The accounting profession's role here could have been very important and critical. The potential expansion would have required a professional discipline with a sense of shared belonging to a consolidated, legalized, yet independent, professional body, and a set of professional standards. This never occured in a real sense.

Most of the major domestic firms in Iran were family owned. As a result, they were less efficient in managerial skills and did not maximize their contributions to national economic development. Since expansion required more money and better management, nonfamily members were sometimes accepted to bring money needed for expansion and managerial skills.

To prepare for these changes, Iran needed to adopt such formats for accounting which would make intelligent and adjusted use of modern methods by adapting them to the special conditions, environment, and needs of the economy and society. However, this was never done.

Many remedies and changes could have helped the Iranian accounting education and profession. These remedies were proposed in a research report by the author but were never implemented.[40] Some of these recommendations are mentioned here:

1. Accounting legislation including liberalized and simplified requirements in the tax system, and a more equitable tax system both in rate structure and its application.
2. Establishment and enforcement of fairly detailed rules of professional conduct, official code of professional ethics, and technical standards for accounting.
3. Educating accountants to question the value of traditional procedures rather than to accept them without inquiry.
4. Inclusion of a business economics orientation in the accounting education programs.
5. Standardization of the curricula of accounting schools and the requirements for accounting degrees.
6. Inclusion of the following courses in the curricula of accounting

[40] Tahirih Khodadoust Foroughi, "An Analytical Investigation into Accounting technique tends to be of the form: I lend you $10, you return to me $10 and Education and Profession in Iran," *Daneshe Modiriat* (Fall 1977): 52-85.

programs, and especially in graduate programs of accounting: economic development, economic development in Iran, accounting philosophy and thought, accounting theory and concepts, accounting for developing countries, role of accounting in economic development, social and behavioral accounting, research methodology, and international accounting.

7. Expansion of graduate accounting programs to educate writers, educators, and researchers rather than technicians.

8. Provision for expanded communication and cooperation between the Iranian accounting schools and accounting schools in other countries.

9. Pooling of the services of the accounting faculty under the supervision of the Ministry of Higher Education for maximum optimal utilization of their knowledge.

10. Using the services of graduate students of accounting for instruction at the undergraduate level.

11. Increasing the average salary of accounting professors to become more competitive with the market for accountants and supplementing these salaries with additional earnings (such as a reasonable amount of consulting), as well as special tax exemptions.

12. Fostering close cooperation between accounting educators and practitioners.

13. Special licensing of accounting departments and schools to allow their professors and students to do some practical work.

14. Offering better financial and tax incentives for writers of good textbooks and other accounting literature.

15. Steady publication of at least one accounting periodical or bulletin of high quality through generous financial and ideological cooperation between educators, industry, and the profession and providing tax incentives for these and similar contributions.

16. Formation of an accounting research agency with the effective financial and faculty participation of all of the major schools of accounting. This step could have enabled intellectual research on various aspects of Iranian accounting and could have led to the creation of new ideas, concepts, principles, standards, and theories.

17. Demarcation and separation of the functions of the two accounting associations. The government-led Official Accountants Institute was proposed to supervise tax and public accounting by licensing official accountants to engage in the certification of financial statements for taxation and other similar purposes. The private Chartered Accoun-

tants Association was to be given full and independent responsibility for regulating accounting and auditing practice and establishing a body of accounting principles and techniques; establishing specific rules of professional conduct and standards and a formal code of professional ethics; controlling practice and taking disciplinary action, such as cancelling the membership of members who engage in collusion and fraud, and whose conduct does not conform to professional standards and ethics; establishing a standardized minimum curriculum course requirement (with the help of educators) for an accounting degree and for passing the accountants' qualifying examinations; contributing to accounting research and education; helping to expand and enhance the role of accounting in the capital market and in the mobilization of the nation's capital and other resources; taking necessary steps to improve the image of the profession and to gain stature, respect, and recognition for the profession and its unity and integrity; developing a close relationship between the accounting profession and international accounting bodies such as the American Institute of Certified Public Accountants and the British Institute of Chartered Accountants; providing suggestions for taxation and other regulatory laws, and consulting and advising the government on accounting and accounting-related legislation, and acting as a middleman between accounting educators, practitioners, and the government; enhancing cooperation, interaction, communication, interchange of ideas, skills, and thoughts between the government, legislators, practicing accountants, and accounting educators, for the purpose of gearing education, practice, and the legal and taxation environment to the needs of the society (this cooperation never existed in Iran and its lack was one of the major signs of unbalanced growth, so characteristic in many areas); and paving the way for the establishment of an association of management and cost accountants.

It was recommended that members admitted to this association should be given the right to engage in various work such as management consulting, budgeting and forecasting, general management services, establishing accounting systems, feasibility studies, production scheduling and control, and internal auditing. It was also suggested that only those members who wished to go into public and tax practice should be licensed by the government-sponsored body, after they were admitted for membership in the private-sector Chartered Accountants Association. The proposed plan was a compromise between the ideal of full independence, and the two-body system which had led to confusing and overlapping of duties and functions.

Not only were these recommendations never put into action, but as was demonstrated in this article, the socioeconomic-political crisis of 1978-79 completely halted the economic, professional, and educational activities in the country. One of the disciplines which was largely affected by the events of 1978-79 was accounting.

The revolution changed the nature and extent of accounting information required from private enterprise. Furthermore, the insistance of the government on following religious rules and laws affected private enterprise and its accounting considerably. All banks and large-scale industries which were the major forms of economic concerns were confiscated and nationalized. This brought new and different demands on the accounting services and functions. Information now needed was almost either nonexistant or very difficult to obtain from the previous accounting systems, or was not understood by the new authorities.

Amalgamation of banks and prohibition of interest caused a shift from precrisis tradition of banking, commercial, industrial, and other economic relationships to the new method of noninterest-type of economic activities.

Universities were closed and colleges of business and accounting were amalgamated. However, emphasis is now shifting from the university education of accounting to Islamization of all fields relating to money and finances. Islamic economic and financial laws and rules, such as Khoms, Zakat, and noninterest transactions, have led to incredible changes in the situation of accounting in the country.

These evolutions and changes have now led Iranian accounting to a situation which has brought both confusion and challenge to the accounting community as well as to those users of accounting information who still have relationships with the economic institutions.

Whether the country and its accounting community of educators and practitioners will be able to pass successfully through these critical times is a question which only the future can answer. This evolution and change in the environmental and internal world of Iranian accounting have opened a new field in the area of international accounting, the field of post-crisis accounting.

Bedford has said:[41]

> ... adaptation to environment as a necessary condition of accounting evolution cannot be questioned for a moment. It is quite evident that a discipline

[41] Norton M. Bedford, "The Basis of the Evolution of Management Accounting," *Management Accounting 1980* (Urbana, Ill.: University of Illinois, 1980), p. x.

or profession would disappear, should it fail to bend to the conditions of existence which are imposed on it. But it is one thing to recognize that outer circumstances are forces accounting evolution must reckon with and quite another to claim that they are the directing causes of the evolution of accounting. This view excludes the hypothesis of basic internal intellectual impetus that has carried accounting, by more and more complex forms, to higher and higher destinies.

It is hoped that Iranian accounting, while adapting to the new environmental conditions, will use its internal intellectual impetus for advancement to better destinies in the future.

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APPENDIX: SAMPLING PROCEDURE AND QUESTIONNAIRE DISTRIBUTION

The target population for this study was the Iranian industrial concerns. Items included in the sampling units were classified into two kinds: elementary and primary. Elementary sampling units were defined as all the accounting-related items contained in the population whose characteristics were to be measured or known, such as accountants, accounting procedures, and accounting aspects. Primary sampling units (population), which are normally defined as the groups or clusters of the elementary units, were defined to be industrial units operating in Iran. The sample was, therefore, a collection of primary sampling units (industrial firms) selected as a representative sample or microcosm from which inferences about the population could be made. This was based on the universally agreed research concept that a sample may contain primary sampling units, even though its purpose is to observe the properties of the elementary sampling units.[1]

This primary sampling population, as well as its elementary units, were carefully defined. The units of the primary sampling population were, therefore, defined to possess the following criteria: (1) manufacturing business, and (2) private-sector firm.

To insure comprehensiveness of the study, the sampled population in general was defined as: (1) young as well as medium-aged and old units; (2) small as well as medium-sized and large units; and (3) domestic as well as multinational units.

Elementary sampling units were defined to be services or outcomes of the following aspects of accounting used by the primary sampling units (private industrial enterprises): (1) profession: private practice, public practice, legislation, and procedures and techniques, and so forth; and (2) education.

Characteristics of elementary sampling units to be investigated were identified as (1) background history; (2) perception of the role of accounting in Iranian private industry; (3) place, role, type, and function of accounting in Iranian private industry; (4) accounting skills employed in private industry; (5) accounting standards; (6) private industry's use of accounting services; (7) foreign and other influences on aspects of Iranian accounting; (8) Iranian accounting and the law; (9) standard of accounting education in Iran; (10) contribution of Iranian accountants to and their use of accounting literature and research; and (11) extent of major types of outside services used by Iranian industrial enterprises.

Interview and questionnaire guides were designed in eleven parts to cover all the categorized characteristics of the elementary sampling units explained earlier. A list of all industrial private enterprises registered as members of Iran's Chamber of Commerce, Industries, and Mines was used for sampling. A random sample was not considered to be sufficient and appropriate, because while it would meet the criteria for the units of the primary sampling population, it would not necessarily meet the definition of the sampled population explained before. A judgment sample was, therefore, taken of which 50 percent were randomly sampled units and 50 percent were units selected on the basis of judgment sampling.

[1] Ya-Lun Chou, *Statistical Analysis; With Business and Economic Application* (New York: Holt, Rinehart & Winston, 1969), pp. 350-371.

The use of judgment sampling is, of course, justified and, in fact, necessary under special conditions and circumstances.[2] When the desired elements of the sampled population do not equally and universally exist in all the units of the target population, when inclusion of exceptional and special units in the sampled population is essential for the completeness of the research, or when the universe includes a relatively small number of sampling units, a simple random selection may miss the more important elements. Judgment selection, on the other hand, would certainly include them in the sample. For example, a study of the coffee plantation would be questionable if Brazil were not included. Similarly, without Dahmler-Benz in the sample, a study of the German automobile industry would yield equally unreliable results. Likewise, a study of Iranian industry and its role in bringing about evolution of accounting would have been equally unsatisfactory if certain Iranian industrial firms, such as the Melli Shoe Company, which had practically gone through all of the important stages of twentieth-century social and economic modernization and change, were not included in the sample. Thus, it was decided that partial judgment sampling would best serve the purposes of this study in that it would yield to representative and reliable results.

Of course, the reliability of sample results in judgment sampling is dependent upon the quality of the sampler's expert knowledge or judgment. Therefore, although the author has known Iranian industry personally and closely for several years, as the basis for her judgment sampling, she also benefited from constructive and expert suggestions of several individuals who had had long acquaintance with Iranian business, industry, and accounting.

The population thus sampled included small, medium-sized and large concerns. It also included young, medium-aged, and old units. Multinational concerns were also included. Furthermore, it contained units from major branches of industry: food processing, textiles, shoe manufacturing, construction materials, home appliances, automobiles and other vehicles, metal works, and so forth.

Two months after the questionnaires were mailed, a follow-up letter was mailed to those sampled firms who had not responded to the questionnaire or had not identified themselves on their responses. To assure the absence of bias, a list of those who called and identified their firms reaffirming that they had already responded was kept and added to the list of those firms who had originally identified themselves. A study of the final list showed a structure similar to the original sampled population; that is, it included small, medium-sized, and large firms, as well as new and established firms, multinational firms, and firms from diversified branches of industry. A study of the responses to Part I of the questionnaire also showed a similarity of structure as to size and age of the responding firms, when compared with the original sample.

One hundred copies of the questionnaire were distributed, of which nine were returned unanswered due to different reasons such as change of address and closing of the firm, and thirty-eight were returned answered. Therefore, ratio of responses received over the net number of questionnaires was 41.8 percent, which is a good response ratio for Iran.

[2] Ibid.

Eighty-six questions were asked concerning the eleven categories. Responses were received during an eight-month span of time. An examination of early replies as against the late replies revealed close similarities. Thus, the existence of bias was reduced because of similar structure of the responding and nonresponding firms, as well as similarities between the early and late responses. It was not felt that statistical tests needed to be performed. The results were tabulated.

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[1] William A. Dymsza, Multinational Business Strategy (New York: McGraw-Hill, 1972), pp. 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," Accountancy (March 1972): 4-8.

BIBLIOGRAPHY

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American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

———. "Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, pp. 98-102.

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Export Diversification and the New Protectionism: the Experiences of Latin America

edited by

Werner Baer
University of Illinois

Malcolm Gillis
Harvard University

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Contents

Inflation Gains and Losses from Holding Monetary Assets and Liabilities 1918 to 1936: A Study of the Development of Accounting Thought in the United States

DALE BUCKMASTER*

INTRODUCTION

The current state of the art of accounting for holding gains and losses on monetary items in the United States stimulated this study. Authoritative accounting groups, such as the Accounting Principles Board, the Financial Accounting Standards Board, and the Securities and Exchange Commission, have abrogated their responsibility by specifying nothing more than measurement technique and reporting placement for monetary gains and losses. There is some, but not much, recent academic literature concerning the nature of holding gains and losses on monetary items and their role in financial statements, but none of the work is well known. Most U.S. accountants appear to be totally indifferent to questions related to these items. The project described here was begun to determine whether some reason(s) for this primitive state of accounting thought could be identified.

The result of the examination of early literature relating to holding gains and losses on monetary items may be partially successful. This paper will ultimately suggest some factors that have retarded the development of theory on the subject. There are other benefits as well. Reviewing the development of concepts of monetary gains and losses

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reveals much concerning objectives of accounting and the criteria for the selection of accounting methods during the period of the study.

The related literature is introduced chronologically in this paper. However, the development of ideas relating to monetary gains and losses may also be divided into three categories: (1) specification of monetary assets and liabilities, (2) measurement techniques, and (3) financial statement treatment. We examine the development of concepts of holding gains and losses on monetary items within the context of these classifications.

THE LITERATURE, 1918-1936

Middleditch's "Should Accounts Reflect the Changing Value of the Dollar?"

Contrary to common opinion, Sweeney was not the first to write concerning the idea of price-level adjusted accounts and monetary gains and losses in the United States. Sweeney's first published work on the subject was preceded by nine years by an article by Middleditch[1] which must be considered within the thought of the period. Not only was the idea of index-adjusted accounts and the resulting "monetary fluctuation" adjustment new, but the balance sheet was considered the primary statement with income measurement of secondary importance. The primacy of the balance sheet is reflected throughout the article, but is also given specific emphasis with the statements:

> Altogether to disregard the changing dollar in accounts does not permit the true condition of affairs to be set forth. When the inaccuracy attains to a considerable magnitude is surely worthy of correction. . . . Adjustments would be made at balance-sheet dates with a view to expressing all the items of the balance-sheet in terms of the same unit and to apportioning whatever advantages or burden these might be to the period in which it belongs. Individual yearly variations may be relatively unimportant, but the cumulative effect may be great.[2]

Balance sheet emphasis surely affected the overall model described by Middleditch. He divided assets for adjustment purposes into "current" and "fixed" rather than "monetary" and "nonmonetary," but the overall approach is basically the same as today. Current assets and liabilities were analogous to monetary assets and liabilities. It is not clear exactly how he intended long-term debt to be considered (treated). He stated, "Fixed liabilities would be treated in an analogous way (to current liabilities), but opposite in effect, to fixed assets."

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[1] Livingston Middleditch, Jr., "Should Accounts Reflect the Changing Value of the Dollar?" *Journal of Accountancy* (February 1918): 114-20.
[2] Ibid., p. 115.

The Middleditch model reflects the assumption that nonmonetary current assets turn over rapidly enough not to be affected by general price changes. The adjustment for current assets and liabilities, including inventory, is similar to the current adjustment for monetary assets and liabilities. That is, beginning balances are converted to end-of-year balances with the adjustment being an income statement item. Apparently, Middleditch did not intend changes in the holdings of current assets and liabilities during the period to be considered in the adjustment. One might hypothesize that his disregard of these changes and the inclusion of nonmonetary assets and liabilities in the adjustment may be the result of a combination of an embryonic understanding of the concept of price-level accounting and the secondary importance of the income statement.

Measurement technique for monetary gains and losses is basically the same for all model variations. That is, the relevant asset and/or liability balances are multiplied by the appropriate index numbers. Each model can vary in three ways: (1) definition of the appropriate assets and liabilities to be adjusted, (2) the technique for considering changes in the balances during the period, and (3) the selection of the type of index to be used for the adjustment. Technique is of little importance in this paper since it generally reflects a concern for precision rather than being affected by any variation of concept. In the case of Middleditch's article, as with most other writers on this subject, selection of appropriate index is important since index selection reflects the concept of capital to be maintained. His selection of the Bradstreet's "business barometer" is dictated by the ideas that accounts should reflect general (as opposed to specific) price movements for businesses (as opposed to stockholders).

Net gain or loss from holding current assets and liabilities would appear in the income statement under the caption, "Monetary Fluctuation," with the offsetting debit or credit appearing in the "Net Worth" (Stockholders' Equity) section of the balance sheet. Middleditch was very explicit in indicating that "Monetary Fluctuation" should be labeled as not being from business operation.

If we interpret literally Middleditch's statement that fixed liabilities are opposite in effect to fixed assets, then the gain (in an inflationary period) from holding long-term debt would be in a balance sheet account called "Monetary Fluctuation of Fixed Liabilities (Long-Term Debt)" and the offsetting debit would be to a stockholders' equity account. Again, Middleditch indicated that the debit is not to be

considered a part of retained earnings. Presumably, this debit would go into the same equity account as the current items and noncurrent asset adjustments.

There is little in Middleditch's article that indicates the origin of the model he proposed. The only reference in the article to a source other than the price-change index is to Fisher's *The Purchasing Power of Money.*[3] Presumably, the methodology was developed by Middleditch with the underlying concepts being influenced by the work of Irving Fisher.

Sweeney's "Correspondence — German Inflation Accounting"[4]

Sweeney's first published work on accounting for price change was his "Effects of Inflation on German Accounting."[5] He described inflation in Germany from 1914 through 1923 and German accountants' reaction to the hyperinflation of the 1921-23 period. From this description, he moved into an explanation of the superiority of depreciation of fixed assets adjusted for general price-level change over depreciation based on replacement costs for determining capital maintenance. This discussion is totally in terms of nonmonetary assets, and there is no mention (or hint) of recognition of holding gains or losses on monetary items.

"German Inflation Accounting"

This is the sequel to his 1927 article on German inflation, and he described the German "stabilization" method. It is clear from this second article why no mention was made of monetary items in the first article. The reason is simply that the German method did not make the monetary/nonmonetary dichotomization necessary. All balance sheet accounts were converted to their equivalent in gold marks. That is, the ending balance for each balance sheet account was converted to its gold price equivalent on the statement date. Then the conversion method of, for example, cash and plant assets is identical. The amount of cash reported in the balance sheet changes just as the amount of a nonmonetary asset changes.

The debit or credit required to convert the paper mark balances to gold mark balances for each account is illustrated in the sample income statement in the article. There is a section of the income statement called "Money value loss on" under which each of the balance

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[3] Irving Fisher, *The Purchasing Power of Money* (New York: Macmillan, 1911).
[4] Henry W. Sweeney, "Correspondence — German Inflation Accounting," *Journal of Accountancy* (April 1928): 310-11.
[5] Henry W. Sweeney, "Effects of Inflation on German Accounting," *Journal of Accountancy* (March 1927): 180-87.

sheet accounts requiring a debit adjustment is listed with the required debit. There is a corresponding section called "Money value gain on" under which the balance sheet accounts requiring credit adjustments and the adjustments are listed. No distinction is made among the types of adjustment other than that of gain or loss. Asset, liability, and equity adjustments all appear together in the two sections.

Two things concerning monetary gains and losses are obvious from the article. First, Sweeney had yet to develop any concept of the nature of holding gains and losses on monetary items. Secondly, the relative unimportance of income measurement during this period retarded serious consideration of the nature of any type of holding gains or losses.

Although Sweeney's concepts were rather primitive at this time, there are some interesting statements that are indicative of his ultimate position. He recognized that altering the balance sheet amounts of monetary assets is not satisfactory. Sweeney stated:

> Assets and liabilities representing contractual amounts expressed in the depreciating currency should have their paper-mark balances shown, as well as the gold mark balances. . . . The gold-mark equivalent of the final balance represents the gold value of such balance, but the paper-mark balance shows the amount that is actually receivable and thus the amount that will be the source of varying gold values in the future.[6]

Another comment indicative of his subsequent position is this:

> Perhaps they [holding gains and losses] should be designated as adjustments inasmuch as they are not in every case true gains or losses . . . as no profit from monetary depreciation could have occurred as yet.[7]

This statement signals his later position that monetary gains and losses should be reported as "realized" and "unrealized."

Sweeney closed this article with a statement that indicates both his original motivation for reviewing the German literature and the overall concept that determines the nature of his development of his system of "stabilized accounting." He stated:

> But the method that Germany developed of necessity to express values in terms of a unit more stable than the current money is still strongly applicable, not only in Germany but also in the United States. For although the monetary unit of a strong nation no longer fluctuates in terms of *gold,* it still fluctuates in terms of *value,* which, as economists have long been demonstrating, is measured in the last analysis by purchasing power over goods and services.[8]

[6] Henry W. Sweeney, "German Inflation Accounting," *Journal of Accountancy* (February 1928): 113.
[7] Ibid., p. 114.
[8] Ibid., p. 118.

Allen's "Correspondence"

An interesting letter from Mr. J. H. Allen appeared in the "Correspondence"[9] section of the *Journal of Accountancy* a few months after "German Inflation Accounting" was published. Mr. Allen felt that "stabilized balance sheets" were appropriate, but he also felt that the unrealized gains from holding debt should not be run through the "profit-and-loss account." The dominance of the conservatism and realization concepts is reflected in his statement, "We should adhere to accounting principles, which require that provision be made for all possible losses and that no unrealized gains be taken up as profits."[10]

It is tempting to suggest that Allen's letter was provoked by concern for income measurement, but that inference may not be justified. Allen suggests that unrealized gains and losses on monetary items should be recognized in a currency adjustment account, a credit balance being reported

> as a reserve against subsequent fluctuations, or, if a debit, should be offset by an equivalent appropriation from surplus .... If the money-value differences are carried to an account such as the one suggested, then it will be necessary to change the depreciation in paper marks, so that the profit and loss does not contain both gold and paper marks.[11]

These comments taken within the context of accounting thought of that period suggest that Allen might have been as much or even more concerned with balance sheet classification as with income measurement.

Sweeney's "Response to Allen"

Sweeney's response[12] is both enlightening and somewhat surprising. It is enlightening in that there is no indication that he had started to develop the ideas of the treatment of monetary gains and losses he suggested in this later work. His comments on the merit of Allen's suggestion are limited to the statement:

> Mr. Allen's suggestion seems quite sound, . . . with regard to present orthodox accounting theory, and would have to be considered very carefully if any adaptation of German methods were to be attempted in this country.[13]

Sweeney offered an explanation of the German methods. (He mentions Mahlberg and Schmalenback specifically.) The nature of this explanation is surprising in that it is totally in terms of practicality

[9] J. H. Allen, "Correspondence — German Inflation Accounting," *Journal of Accounting* (April 1928): 310.
[10] Ibid.
[11] Ibid.
[12] Sweeney, "Correspondence — German Inflation Accounting," pp. 310-11.
[13] Ibid., p. 311.

rather than his more typical rationale based in economic theory. Sweeney suggested that Allen's method was not used by the Germans because (1) it is too difficult to segregate gains and losses from price-change and operations, (2) "the final losses would have seemed unbearable if all price-variation profits and losses resulting from application of balance-sheet stabilization had been excluded,"[14] and (3) toward the end of the hyperinflationary period, prices did not seem likely to drop so that a "reserve" would not be necessary.

Sweeney's "Maintenance of Capital"

Like his first article on German inflation, Sweeney's "Maintenance of Capital"[15] did not mention holding gains or losses on monetary items. But this article has important implications for the development of his ideas in subsequent articles and his book.[16] In "Maintenance of Capital," Sweeney developed his arguments for the appropriate concept of capital maintenance which determines his index selection for obtaining "stabilized accounts."

Sweeney began with the proposition that "the fundamental purpose of accounting should consist of an attempt to distinguish clearly between the capital and income."[17] He proceeded to examine several capital maintenance concepts. And, like all good economists, he concluded that maintenance of *real* capital is the only appropriate concept, more specifically, "maintenance of absolute capital measured in terms of general purchasing power."[18] The substance of the reasoning that led him to select this particular concept of capital maintenance and, consequently, the most comprehensive general index available as appropriate for "stabilizing" accounts is contained in the following paragraph.

Most men who invest capital do not, however, definitely plan to use it or its income, if any, to acquire eventually any particular combination thereof, and even if they do, they are quite likely to change their minds, under the rapidly moving conditions of modern life, before the eventual date for such use of the purchasing power arrives. Unless, therefore, there is quite definite intention to employ an investment for eventual acquisition of a specific commodity or group of commodities — and not merely the intermediate current acquisition of business goods and services necessary for attainment of the ultimate

[14] Ibid.

[15] Henry W. Sweeney, "Maintenance of Capital," *Accounting Review* (December 1930): 277-87.

[16] Henry W. Sweeney, *Stabilized Accounting* (1936; reprint ed., New York: Holt, Rinehart, and Winston, Inc., 1964).

[17] Sweeney, "Maintenance of Capital," p. 277, attributes this idea to J. M. Clark, "Valuation for the Balance-Sheet and Profits," *II et International Accountants-congres* (Amsterdam, 1926).

[18] Ibid., p. 284.

goal — the most practical assumption in the light of experience is that greater general economic command, which will be available for later expenditure in any direction, is the actual object of business endeavor and that, therefore, maintenance of capital should be based upon the general price index.[19]

Subsequently, Sweeney stated, "Real capital should, of course, be ascertained on the basis of the national general index."[20]

The preceding statements summarize Sweeney's ideas of capital maintenance in terms of the investor, not the business, and indicate that the investor may either reinvest or consume capital returned from the business. This frame of reference is crucial as support for adjustment using an economy-wide index. Two other facets of Sweeney's thinking are in evidence although not explicitly stated: (1) he was working within the context of the "proprietary theory," and (2) he based his arguments on the assumption that the balance sheet and the income statement may be used as long-run models of the firm.

It is apparent from Sweeney's first two articles[21] and his frequent references to post-World War I inflation in France and Germany and to the accounting literature of those countries that he was influenced by the French and German experiences to investigate the problem of accounting for changing prices. But English-speaking economists seem to have provided the dominant ideas upon which the capital maintenance portion of his theory is based. The key references supporting his ideas of capital maintenance are to Marshall[22] and Van Strum.[23]

Wasserman's "Accounting Practice in France during the Period of Monetary Inflation (1919-1927)"

By 1931 *Accounting Review* standards, Wasserman's article[24] was extremely long. In a time when *Accounting Review* articles were normally from six to ten pages, he used thirty-two pages to review the reaction of French accounting theorists to post-World War I inflation. Wasserman begins with a description of the French inflation and the problems it posed for businesses. The remainder of the article is devoted to describing five different variations of inflation accounting

[19] Ibid., p. 285.
[20] Ibid.
[21] Sweeney, "Effects of Inflation," and "Correspondence — German Inflation Accounting."
[22] Alfred Marshall, *Principles of Economics,* 8th ed. (London: Macmillan, 1920).
[23] K. S. Van Strum, *Investing in Purchasing Power* (New York: Barrons, 1925).
[24] Max J. Wasserman, "Accounting Practice in France during the Period of Monetary Inflation (1919-1927)," *Accounting Review* (March 1931): 1-32.

proposed by French theorists.[25] Several points that the current author believes to be new in American accounting literature are made in both Wasserman's introduction to and review of French methods.

The French theorists, like the Germans, were concerned with the relationship of the paper franc to the price of gold. That is, the conversion methods were designed to stabilize the franc in terms of gold. Wasserman, presumably following the lead of the French theorists, implied that the paper franc/gold index was representative of a general purchasing-power index.

A most interesting aspect of Wasserman's analysis is his emphasis on problems of maintaining real working capital in a period of inflation. American accounting theorists were concerned with capital maintenance and replacement of physical assets; if Wasserman was not the first to identify working capital maintenance as an accounting problem, he certainly was the first to discuss it extensively. His introduction contains a discussion of French companies' problems with eroding real working capital,[26] and he frequently re-emphasizes the importance of the problem in the article.

Wasserman recognized the working capital problem as (1) arising because of inventory profits, and (2) the increased absolute amounts of monetary working capital required to maintain real monetary working capital. He described the problem of erosion of real monetary working capital as follows:

> Whenever credit was extended on open account to the customers during a period of rising prices, the firm was repaid in depreciated francs, that is, in francs having a lower purchasing power. The longer the period of credit, the lower the purchasing power of the francs received finally from the sale of goods. This practice did much to reduce the effective working capital of some firms during inflation. While the nominal value of working capital was maintained, and in most cases increased, its purchasing power or its gold value declined very steadily. Of course, if the company received equal credit terms from its creditors that it extended its clients, then the working capital showed no depletion, and if shorter terms and amounts were extended than it received, then the working capital increased. It was only those firms who extended larger credit terms and amounts than they received who suffered.[27]

[25] P. C. Raffegeau and A. Lacout, *Etalissement des Bilans en Francs-or* (Paris: Payot, 1926); Gabriel Faure, *Bilans et Comptes en Francs-or,* 2nd ed. (Paris: Nouvelle Librosie Nationale, 1926); Fernand Leger, *Le Redressement des Bilans en Francs-pepier* (Paris: Editions Experta, 1926); Gail Fain, *Comment se Defendre Contre L'inflation* (Paris: Compagnie des Chefs de Comptabilite de la Region Parisienne, n.d.); and Lucian Thomas, *La Tenue des Comptabilites en Periode D'instabilite monetaire* (Paris: Editions Experta, 1927).

[26] Wasserman, "Accounting Practice," p. 5.

[27] Ibid., p. 4.

Wasserman's concern with maintaining effective monetary working capital was probably the result of Leger's work.[28] Leger, according to Wasserman, classified "loss on the excess of the incorporeal (monetary) working capital assets over the incorporeal working capital liabilities."[29] Leger suggested, says Wasserman, that "for that part of working capital which cannot be so invested (in nonmonetary assets) . . . a reserve be constituted by a debit to profit and loss sufficient to compensate for the decline in the gold value of this element of the working capital."[30] Leger's treatment of monetary items was apparently vague as were those of the other French theorists who suggested adjustments for monetary items.

Of the systems reviewed by Wasserman, Thomas' method seems to be exceptionally complete. From Wasserman's description, it appears that Thomas would have a control account for all offsetting debits and credits including monetary items required to adjust paper franc amounts to gold franc equivalents. It also appears that for the nonmonetary assets, the conversion is not simply an index conversion, but a restatement to replacement cost in terms of gold. This is of some consequence if the present author's interpretation is proper, since it provides evidence of an early replacement cost model that also recognized the replacement cost of monetary stocks.

Wasserman indicated that long-term debt would also be adjusted through Thomas' control account. Also, in the introductory section, the following point is made:

> The account for bonds is also always exact since it expresses a legal relation. The corporation can only be obliged to pay back the bonds in terms of nominal francs. However, the depreciation of the purchasing power of the bonds constitutes an element of profit for the business which classical inflation theorists have long stressed. Unfortunately the books do not show this gain and it would be wise to install an accounting method which would bring out this element of profit.[31]

It is not clear from Wasserman's description of Thomas' method if the control account was to be run through the income statement. In fact, income measurement is treated in a very cavalier manner. Again, it appears that the relative unimportance of that statement during the first part of this century was a very important factor in determining the attention given holding gains and losses on monetary items. Perhaps had the income statement been given the prominence that it is today, progress in developing specific treatments of holding gains and

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[28] Leger, "Le Redressement."
[29] Wasserman, "Accounting Practice," p. 21.
[30] Ibid., p. 23.
[31] Ibid., p. 5.

losses would have been accelerated. Certainly, the essential ideas necessary for the development of methods similar to contemporary methods were imbedded in the French literature and only lacked refinement.

Sweeney's "Income"[32]

Although Sweeney's obsession with realization was evident in his 1928 article and the related correspondence,[33] he used this article to introduce a position that subsequently resulted in his realized/unrealized dichotomization of monetary holding gains and losses. He argued that the "realization" principle is useful, but both realized and unrealized value increments are income. Therefore, both should be reported, but the unrealized portion must be identified. His caution is reflected in the following statement:

> For an apparent opportunity; e.g., to sell goods at a profit, on an apparent increase in the value of capital asset, may turn out to be a mere illusion,—the result of deceptive appearances or a faulty reasoning or of more unwarranted optimism; and so any action that may have been based upon a belief in the existence of such income can very easily prove disastrous.[34]

Wasserman's "French Enterprise under Inflation: A Balance Sheet Analysis"[35]

Wasserman examined the financial statements of forty French firms during the period 1919 through 1925 in this article. He was attempting to determine if "business profits by inflation due to the rise in prices which it engenders," or if "inflation is a grave danger to business, gutting enterprises of their working capital."[36]

The approach was to (1) obtain averages of certain financial statement items for the forty companies, (2) deflate the averages with an overall wholesale price index, and (3) identify the apparent trends. Since average real capital was maintained and 30 percent of new plant and equipment was financed with internally generated funds, Wasserman was convinced that business benefited from inflation and that, on average, inflation does not cause serious working capital problems.

Within the context of a balance sheet analysis, Wasserman's study may have provided convincing evidence concerning the impact of inflation on the monetary position of the firm. But the modern theorist, with his concern for capital maintenance income models, will find no

[32] Henry W. Sweeney, "Income," *Accounting Review* (December 1933): 323-35.
[33] Sweeney, "Correspondence — German Inflation Accounting."
[34] Sweeney, "Income," p. 333.
[35] Max J. Wasserman, "French Enterprise under Inflation: A Balance Sheet Analysis," *Accounting Review* (June 1934): 130-39.
[36] Ibid., p. 130.

answers in a study such as Wasserman's. His findings are as we would expect. On average, real working capital would be maintained (particularly when there is an obvious survivor bias and there is no adjustment for growth or decline). Rather, our question would be "What are the costs of maintaining working capital and what is the impact of inflation on these costs?" In no sense is this question answered.

Paton's "Aspects of Asset Valuation"[37]

No new concepts or methods are introduced in this article, yet it does contain two considerations of interest: (1) the position of the leading U.S. accounting theorist of the time toward accounting for holding gains and losses is explicitly stated; and (2) there is an explicit statement of an attitude prevailing throughout the period of the study that, with the unimportance relegated to income measurement, explains why more attention was not given holding gains and losses on monetary items.

Paton was very explicit in stating his position toward including monetary gains and losses in financial statements. He stated, "Such accounting [measuring holding gains and losses] would be quite incorrect, as a substitute for our present procedures, in connection with all entries in account [*sic*] involving cash, receivables, and liabilities."[38] Rather, as a better means of providing information useful for coping with price changes, Paton suggested:

> What is needed, it seems to me, is the development of supplementary statistical procedures, quite outside the ledger technique, which will attempt to answer special questions in which the owners and managers are or should be interested.[39]

From these statements, it is obvious that Paton felt that including monetary holding gains and losses in financial statements is inappropriate.

The other interesting aspect of this section of the article concerns the role that reporting monetary holding gains and losses might fulfill. As Paton continued this passage, he indicated that a study might be made of the impact of changing prices on monetary working capital requirements over a period of years so that policies might be formulated for handling funds and incurring liabilities.[40] Even though Paton included owners as statement users early in the passage when he recog-

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[37] William A. Paton, "Aspects of Asset Valuations," *Accounting Review* (June 1934): 122-29.

[38] Ibid., p. 128.

[39] Ibid.

[40] William Paton, Jr., did conduct just such a study twenty-four years later; see *A Study in Liquidity: The Impact of Inflation Monetary Accounts* (Ann Arbor: Bureau of Business Research, University of Michigan, 1958).

nized specific information needs, they are the needs of management, and there is no consideration of the type of ownership we find in the large publicly held corporation. This is typical of the literature. This attitude surely affected the importance generally attributed to measuring holding gains and losses on monetary items. Management needs much more decision-specific information than is provided by measurement of monetary holding gains and losses. Explicit measurement of monetary holding gains or losses does not replace any of the other conventionally required information (for example, cash forecasts and capital budgets) and may not have any incremental value at all. If measurement of holding gains and losses on monetary items has any value at all, that value is probably derived from the information provided statement users external to the firm, and then value may exist only when the measurement is an integral element of some form of capital-maintenance income model.

Sweeney's "How Inflation Affects Balance Sheets"

The sole incremental contribution of this article is Sweeney's identification of Carl Snyder's revised general index prepared for the Federal Reserve Bank of New York as the best general price-level index for the United States.[41]

Sweeney's "How Inflation Would Affect Balance Sheet of a Business"

Two additional elements of Sweeney's final system appear in this article.[42] The more general element is reflected in his discussion of monetary items in a "stabilized" balance sheet at their nominal (legal) value. As a result, Sweeney discussed the monetary/nonmonetary (money-value/real value) distinction in his published work for the first time.

The more specific aspect of accounting for monetary items that appears for the first time in the literature is his identification of redeemable and/or callable preferred stock as a monetary item. He listed the monetary items as cash, "accounts and notes receivable, accounts and notes payable, mortgages and bonds owned, mortgages and bonds owed, and outstanding preferred stock that is voluntarily or involuntarily redeemable."[43]

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[41] Henry W. Sweeney, "How Inflation Affects Balance Sheets," *Accounting Review* (December 1934), p. 275.
[42] Henry W. Sweeney, "How Inflation Would Affect Balance Sheet of a Business," *Controller* (June 1935), pp. 106-10.
[43] Ibid., p. 108.

Sweeney's "The Technique of Stabilized Accounting"

The publication of this article[44] marked the completion of the development of Sweeney's "stabilized" accounting model. Sweeney is, of course, best known for his 1936 book, *Stabilized Accounting,* but no substantive ideas or model modifications are added by the book. This article illustrates the model just as completely as the book does.

Sweeney's earlier articles are of three types. First, he described European techniques for coping with inflation and/or how the application of these techniques affected balance sheets of the countries being discussed. Second, he used the article to develop an important idea that supports his model. Finally, in the later articles, he related some element of the model to the U.S. environment and provided an example of the impact of that element. This last article of the series illustrates with a comprehensive example the ideas that Sweeney had been developing in all the earlier articles of the series.

Much of Sweeney's earlier work had implied the necessity of conversion of each transaction to end-of-period dollars. The major element introduced in this article is the application of the "stabilized balance sheet" method to the example. Of course, this method is the European method adapted to the Sweeney model, but any attempt to apply the Sweeney model would be impractical without some similar methodology. Thus, the "stabilized balance sheet" technique is matched with the Sweeney model in order to make the model a practical possibility.

One interesting position indicated in the article reflects a compromise of an earlier position. Sweeney argued that general purchasing power is the appropriate measure rather than specific purchasing power in his conceptual articles of the early thirties. He did not necessarily abandon his earlier position; rather, he stated, as a secondary argument, that his general purchasing-power adjustments might be considered surrogates for replacement costs.

Sweeney was not so naive as to believe that general purchasing-power adjustments were good estimates of replacement costs. He makes this clear in an earlier article[45] in which he examines possible methods of obtaining replacement costs. Rather, the inclusion of this position most likely reflects an attempt to obtain broader-based support for his model.

Sweeney's concern for the distinction between realized and unrealized income appeared frequently and consistently in his articles. In this last article, the fruition of this concern is illustrated. As we would

[44] Henry W. Sweeney, "The Technique of Stabilized Accounting," *Accounting Review* (June 1935): 185-205.

[45] Henry W. Sweeney, "Approximation of Appraisal Values by Index Numbers," *Harvard Business Review* (October 1934): 108-15.

expect, he divided his income statement into realized and unrealized sections, and holding gains and losses are to be identified and reported in this manner. Sweeney also confirmed that he had not started to develop his specific treatment of monetary gains and losses prior to J. H. Allen's comment[46] on his article that appeared early in 1928. Sweeney stated:

For the stimulation that led to the eventual development of ways to compute accurately the realized and unrealized profits and losses on changes in the value of money the author desires to acknowledge indebtedness to J. H. Allen's criticism . . . of the author's "German Inflation Accounting. . . ."[47]

Jones' "Financial Statements and the Uncertain Dollar"

This article and the Sweeney article just discussed are the first two articles dealing with historical cost/constant dollar accounting in which income measurement considerations are treated as important. Also, this is the first article on the subject to make the argument for general price-change accounting in order to induce tax authorities to recognize the impact of inflation on real income. Jones stated:

The chances of the adoption [by tax authorities] of such a rule [exempting that portion of revenue required to maintain capital because of price changes] would be materially improved if it should become the accepted accounting practice rigorously to exclude all such fictitious gains and losses from the income account.[48]

Jones' attitude toward holding gains and losses on monetary items is somewhat puzzling. He considered the net gain or loss real, yet excluded it from the income statement.[49] His position can be compared to those theorists who have recently supported a replacement cost model as a capital maintenance model, yet fail to provide for maintenance of monetary stocks.

Sweeney's *Stabilized Accounting*[50]

Stabilized accounting is the culmination of Sweeney's serious efforts to develop a price-change accounting model. In his "Editor's Forward to the Reissue," Stephen Zeff states, "Ideally, one should begin with Sweeney's first article [1927] and proceed through the succeeding 14 (1928-1935) prior to digging into the book."[51] But the reader's objective determines the appropriateness of this advice. If the reader is

[46] Allen, "Inflation Accounting."
[47] Sweeney, "Technique of Stabilized Accounting," p. 188.
[48] Ralph Caughenour Jones, "Financial Statements and the Uncertain Dollar," *Journal of Accountancy* (September 1935): 177.
[49] Ibid., p. 183.
[50] Sweeney, *Stabilized Accounting.*
[51] Stephen Zeff, "Editor's Forward to the Reissue," in *Stabilized Accounting* by Henry W. Sweeney, p. X.

interested only in practical aspects — application methods, cost of application, and the potential impact on reported numbers — then the book is adequate and previously published materials will add little to the achievement of the reader's objective. If, on the other hand, the reader is interested in Sweeney's development of the model, the conceptual rationale for the model, and the criteria applied to evaluate choices, then it is imperative that the reader at least examine the *Accounting Review* articles.

Sweeney did six things in the book. First, he provided a general statement of rationale for historical cost/constant dollar accounting and referred the reader to his articles for support for his statements. Second, he illustrated the model and the methodology of adjustment with a simple example. Next, he discussed the causes of the absolute dollar differences between historical cost/constant dollar numbers obtained in his example. He then demonstrated his model in a replacement cost context; and then he demonstrated the practicability of his model by applying it to the accounting data for three firms and estimating the cost and time required for application. Finally, he attempted to answer the objections to historical cost/constant dollar accounting that had been brought to his attention.

The well-constructed conceptual arguments of Sweeney's middle period articles[52] are not included in *Stabilized Accounting,* so the reader interested in the conceptual basis of Sweeney's position must seek out the articles. A more commanding reason for a reader interested in Sweeney's rationale to read the articles is that in *Stabilized Accounting,* Sweeney was either abandoning an earlier position or being intentionally misleading.

A rather serious and important contradiction of his position as stated in his conceptual articles appears early in *Stabilized Accounting.* Remember that Sweeney had consistently argued that the appropriate capital maintenance concept is maintenance of "real" capital, which he interpreted to apply to all goods in the economy — both consumption and production goods. From this, he deduced that a general price-level index is the appropriate conversion index. Yet in *Stabilized Accounting,* he appeared to argue for a consumer index as the appropriate index. He stated:

> It may be argued, the things that men buy with money are not always consumption goods. Much of the time they are "production goods," such as

[52] Henry W. Sweeney, "Maintenance of Capital"; "Capital," *Accounting Review* (September 1933): 185-97; "Stabilized Depreciation," *Accounting Review* (September 1931): 165-78; "Stabilized Appreciation," *Accounting Review* (June 1932): 115-21; "Income."

factory machinery and buildings. When men buy production goods, however, they do so only because in most cases they hope thereby to obtain eventually more of the consumption goods that they want than they could obtain by buying them in the first place.

In consequence of the foregoing, accounting data should ideally be measured with reference to the progress made in obtaining either more consumption goods or greater power over them. These consumption goods are those represented in the cost of living.[53]

It is rather difficult to believe that Sweeney had changed his position on such an important element of his model. More likely, he was playing the same game that he did in "The Technique of Stabilized Accounting" with his argument for general price-level adjustments as a surrogate for replacement costs. That is, he may have been introducing the consumer idea in order to gain support for his model. Immediately after making his consumer index argument, he dismissed it:

There is a decisive practical objection, though, to using the cost-of-living index in this manner. It is simply that no *comprehensive* cost-of-living index has been compiled, at least in the United States, for periods as short as months prior to 1920 — and without, at least, monthly indexes, accurate enough results cannot be obtained in the many cases where figures for dates prior to 1920 are still prominent in the figures on the accounting statements. ... Fortunately, however, there is an index series that is related to the cost-of-living index in both its content and in its actual index numbers and that does exist in monthly form back to a sufficiently distant point in the past. This index is the index of the general price level ... compiled by Carl Snyder ....[54]

Nothing more was written of a consumer price index.

The illustration of his model requires no comment in this paper. It is brief, easy to follow, and complete. The bulk of the incremental contribution of the book is contained in his case studies and cost of application estimates. The case studies are easy to follow and complete. He convincingly demonstrated that application of the model is practical. However, nothing of conceptual interest was discussed in these sections.

The most interesting section of the book if one has read the series of articles is contained in a section describing Sweeney's differences with Professor Schmidt, a German scholar.[55] It becomes obvious early in the series of articles that Sweeney was working within the context of the proprietary concept and the theory that financial statements were amenable to long-run assumptions. In this section, Sweeney admitted to the latter of the two characteristics: "The writer pleads guilty to this accusation of trying to make the ultimate attainment of

[53] Sweeney, "Stabilized Accounting," p. 4.
[54] Sweeney, "Technique of Stabilized Accounting," p. 5.
[55] Ibid., pp. 40-41.

a long-time aim."[56] That he is working within a proprietary concept is obvious from his frequent and consistent concern, even in his later work, with the balance sheet as the primary statement and with his treatment of noncash firm assets at a consumption price.

It seems to this author that Sweeney's arguments are particularly susceptible to attacks upon his use of statements as long-run devices. Professor Schmidt must have been exercising considerable constraint when he refrained from noting that the firm would either (1) continue for some time into the future, or (2) cease operations and distribute assets to investors. If the firm is to continue operation for at least one or two more periods, then consumption indices have no relevance now and intervening variables between the current reporting date and future liquidation will most likely destroy any predictive value of current application of consumer price indices. Specifically, application of consumer price indices is totally irrelevant to future cash flows of the firm through operations or liquidation. If, on the other hand, the firm is to liquidate, then liquidation value provides a better measure of ultimate cash flow and purchasing power to the consumer than historical cost adjusted for general price change.

SUMMARY AND CONCLUSION

When Henry Sweeney wrote "Forty Years After: Or Stabilized Accounting Revisited" for the reissue of *Stabilized Accounting,* he made the following statement concerning the then recently issued *Accounting Research Study No. 6*[57]*:*

> The main flaw in the Study is its indecisive and unrealistic handling of an inescapable and substantial element in nearly all practical stabilization procedure [*sic*], to wit, money-value gain and loss. . . . The Study's treatment of money-value gain and loss is, first, indecisive because it fails to furnish a clear understanding of whether that common and substantial form of profit and loss ought to be treated as income in nature or as capital in nature.[58]

This same indecisive, unsatisfactory situation still exists in the United States. The Financial Accounting Standards Board's *Statement of Financial Accounting Standards No. 33*[59] is equally vague in indicating what the board intended holding gains and losses on monetary items to represent. The present author wished to know why authoritative

[56] Ibid., p. 41.
[57] Staff of the Accounting Research Division, American Institute of Certified Public Accountants, *Accounting Research Study #6: Reporting the Financial Effects of Price Level Changes* (New York: AICPA, 1963).
[58] Sweeney, *Stabilized Accounting,* p. xxxiii.
[59] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 33: Financial Reporting and Changing Prices* (Stamford, Conn.: FASB, 1979).

accounting groups in the United States were so vague in supporting their position and describing the nature of holding gains and losses on monetary items. Thus, this study was begun. By tracing the history of ideas related to monetary holdings gains and losses, it was hoped that the key to current failures could be found. Even though the literature examined represents only the formative period of thinking regarding holding gains and losses on monetary items, the review of this literature provides some rather interesting insight into contemporary accounting policy.

Henry Sweeney's work still dominates American ideas of holding gains and losses on monetary items just as it did during the thirties. Accounting policy makers in the United States seem to be mentally incapable of separating holding gains and losses from Sweeney's stabilized accounting model. The decision makers seem to recognize that monetary gains and losses are real and should be recognized, but the general price-level adjustment model within which the gains and losses were first recognized does not seem to mesh with contemporary thought. Sweeney's model, the only model that recognizes holding gains and losses on monetary items that was familiar to any substantial number of accountants during the period studied, was as much the product of the economic environment and accounting thought of the time as it was of Sweeney's original ideas. Some of the concepts underlying the work on monetary holding gains and losses during the study period are still applicable, but many of the constraints and ideas are only of historical interest. As has been intimated, policy makers in the United States seem to fail to recognize these antiquated ideas. Consequently, accounting policy makers in the United States are tentative and indecisive in attacking the problem of holding gains and losses on monetary items. The result in *Statement of Financial Accounting Standards No. 33* is recognition of net holding gains and losses but failure to integrate them into the financial statements.

An attitude that had considerable impact on the development of concepts of monetary holding gains and losses was the dominance of balance sheet considerations. Since the income statement was of little consequence, there was little stimulus to examine the role of holding gains and losses in income measurement.

The question of realized and unrealized income was brought to Sweeney's attention in 1928, and he subsequently devoted much attention to dichotomizing monetary holding gains and losses into "realized" and "unrealized."[60] The realization concept may also have resulted

[60] This dichotomization is, of course, an important element of his model that is illustrated in his "Technique of Stabilized Accounting" which also was published in June 1935.

in influencing Jones' recommendations to omit monetary holding items from the income statement.

Another factor that may have resulted in diminishing the attention given monetary items was that financial statements were viewed as primarily tools for management decisions. In the absence of an emphasis on investor information, reporting the effects of holding monetary items is of much less consequence. In the context of management decision making, the primary benefit from recognition of such holding gains and losses is in planning for the balances of monetary items necessary for operation. Measurement of holding gains might facilitate the budgeting process but certainly will not replace it.

An environmental factor existing then, as now, that tended to divert attention from accounting for the impact of price changes on monetary items was the presumed much greater impact of changing prices on nonmonetary items. Changing prices have a much more obvious impact on nonmonetary items and, where there is an allocation of research effort and published space, problems of accounting for nonmonetary items will invariably dominate both allocations.

Environmental factors operated during the period of the study to minimize research effort devoted to the subject of holding gains and losses on monetary items. Yet Henry Sweeney and R. C. Jones, to a much less degree and toward the end of the period, had the foresight to recognize the potential importance of these economic elements in the reporting process. The form of the Sweeney model, however, reflected the accounting criteria and conventions of his time. He felt that the objective of the financial statements was to measure stockholder wealth. His own interpretation of the objective was his insistence that the measure should reflect the long-run use of firm resources. By joining these two ideas, the natural consequence is his selection of a measure that represents general purchasing power. This result of his logic has carried into a time when most of us would define the objectives of financial reporting as something other than the measure of owners' wealth. Policy makers should consider whether they are willing to support an accounting model that has not been justified outside the proprietary concept and contains mixed elements of long- and short-run analysis.

This author suggests that the impact of Sweeney's work is still evident in the accounting policy making process in the United States, and his continued influence is not totally beneficial. If we are to use Sweeney's ideas, they must be adapted to contemporary thought.

APPENDIX. CHRONOLOGICAL LISTING OF CHANGES IN CONCEPTS OR TREATMENTS

Financial Statement Treatment

Source: Middleditch, "Should Accounts Reflect the Changing Value of the Dollar?" *Journal of Accountancy* (February 1918)

Treatment of Concept Introduced: Current asset adjustment presented in the income statement as an expense with the offsetting credit (in an inflationary period) going to a "reserve" account or to "net worth." Separate treatment is also recommended for current liabilities and long-term debt. In an inflationary period, the debit would be to "reserve for monetary fluctuation" or "net worth." The credit is an income item, but not an operating income item.

Source: Sweeney, "Effects of Inflation on German Accounting," *Journal of Accountancy* (March 1927)

Treatment of Concept Introduced: *All* measured holding gains and losses are included in the income statement. A section "Money value loss" is illustrated and includes the measured holding loss on each of the balance sheet accounts. There is also a section, "Money value gain," which contains a list of the measured holding gain for each of the balance sheet accounts.

Source: Sweeney, "Income," *Accounting Review* (December 1933): 323-35

Treatment of Concept Introduced: Argues that both realized and unrealized income should be reported, but that the unrealized portion should be identified.

Source: Sweeney, "How Inflation Would Affect Balance Sheet of a Business," *Controller* (June 1935)

Treatment of Concept Introduced: Discusses holding gains and losses on monetary items in terms of general price-level adjustment. Since nominal value is the reported amount, Sweeney writes of the monetary/nonmonetary dichotomization for the first time.

Source: Sweeney, "The Technique of Stabilized Accounting," *Accounting Review* (June 1935)

Treatment of Concept Introduced: Provides a complete illustration of financial statements that would be obtained from his model. The income statements contain two primary subclassifications: realized and unrealized. Holding gains and losses are classified accordingly.

Source: Jones, "Financial Statements and the Uncertain Dollar," *Journal of Accountancy* (September 1935)

Treatment of Concept Introduced: Holding gains and losses on monetary items are treated as adjustments of retained earnings even though the income statement is treated as an important element of the reporting process. The rationale for his treatment is not discussed.

Specification of Monetary Assets and Liabilities

Source: Middleditch, "Should Accounts Reflect the Changing Value of the Dollar?" *Accounting Review* (February 1918)

APPENDIX (cont.)

Treatment (Concept) Introduced: Does not have a monetary/nonmonetary dichotomy. Considers four classes of "adjustment for monetary fluctuation": (1) current assets, (2) current liabilities, (3) fixed assets, and (4) fixed liabilities. He considers current assets and current liabilities "similar, but opposite in effect." Likewise for fixed assets and fixed liabilities.

Source: Sweeney, "Effects of Inflation on German Accounting," *Journal of Accountancy* (March 1927)

Treatment (Concept) Introduced: Does not have a monetary/nonmonetary dichotomization. All holding gains and losses are treated in the same manner.

Source: Wasserman, "Accounting Practice in France during the Period of Monetary Inflation (1919-1927)," *Accounting Review* (March 1931)

Treatment (Concept) Introduced: Uses the term "incorporeal" assets and liabilities. These items are identified as cash, accounts receivable, other fixed monetary amounts owed to the firm, accounts payable, and bonds payable.

Source: Sweeney, "How Inflation Would Affect Balance Sheet of a Business," *Controller* (June 1935)

Treatment (Concept) Introduced: Lists monetary items as "cash, accounts and notes receivable, accounts and notes payable, mortgages and bonds owned, mortgages and bonds owed, and outstanding preferred stock that is voluntarily or involuntarily redeemable." (p. 108)

Asset Revaluations and Inflation in Australia, 1950 to 1975: An Industry Study

STEWART LEECH, DENIS J. PRATT, and W. G. W. MAGILL*

It is questionable whether the debate on current cost accounting (CCA) has added much to determining the usefulness of revaluations of assets in published financial statements. In the midst of the CCA debate, the Australian accounting profession published an exposure draft, "Accounting for the Revaluation of Tangible Fixed Assets and Investments in the Context of Historical Cost Accounting."[1] The idea involved in the title of this draft — a non sequitur — is reminiscent of the comment made by Dicksee in 1892 when he attempted to outline the state of the law and accepted practice about accounting for fluctuations in asset valuations:

> ... it appears to be entirely at the company's own option whether it bases its balance sheet upon facts or fancies ... this conclusion is somewhat startling; but it is a logical deduction from the present interpretation of the law.[2]

Little has changed since then. The law permits cash dividends from asset revaluation reserves, which effectively is treating such reserves as distributable profits. This would not be allowable if revaluations

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[1] Australian Accounting Research Foundation, *Exposure Draft — Proposed Statement of Accounting Standards,* "Accounting for the Revaluation of Tangible Fixed Assets and Investments in the Context of Historical Cost Accounting" (September 1979).

[2] L. R. Dicksee, *Auditing* (New York: Arno, 1892), p. 136.

were treated as a restatement of capital.[3] The option to revalue assets is available in the United Kingdom and Australia, but not in the United States. In 1938, U.S. companies were effectively prohibited by the Securities and Exchange Commission (SEC) from including asset revaluations in their published reports. The reason for the prohibition of asset revaluations was attributed to the feeling that revaluations were extensive, misleading, and contributed to the financial losses of investors at that time.[4] In 1936, Fabricant[5] provided evidence that the total amount of upward revaluations of fixed assets during the period 1925 to 34 was less than 10 percent of total assets at the end of 1934. Fabricant's study was extended by Dillon,[6] who also concluded that "Corporate asset revaluations in the period 1925 to 34 . . . were not so common nor extensive as is generally believed."[7] It appears that the move against asset revaluations in 1938 by the SEC was based on questionable information and occurred because of the strong convictions of certain members of the SEC. One former chief accountant of the commission described the attack on asset revaluations in the following manner:

> One of the first members of the newly formed SEC to be appointed was a former General Counsel for the Federal Trade Commission who had been in charge of that Commission's very comprehensive investigation of the public utility holding companies. During that study the flagrant write-up policies of the holding companies and their subsidiaries and the havoc they caused when the crash came in 1929 and 1930 kept impressing themselves on the chief investigator to the point that their evil became almost an obsession with him. It was only logical to expect that when he had an opportunity to outlaw write-ups he would do so. So strong were his convictions and so convincing were his arguments against write-ups that all of the other members of the Commission were persuaded to take a positive stand against them from the very first case in which the question arose.[8]

While there has been some change in attitude from this across-the-board prohibition to the position where some form of current asset values should be reported, revaluations are not permitted in the pri-

[3] R. Baxt, "The Law of Dividends — Implications for Accountants," *Chartered Accountant in Australia* (December 1978): 17-25.
[4] C. G. Blough, "Development of Accounting Principles in the United States," reprinted in E. S. Hendriksen and B. P. Budge, *Contemporary Accounting Theory* (Encino, Calif.: Dickenson, 1974), p. 13.
[5] S. Fabricant, "Revaluations of Fixed Assets 1925-1934," reprinted in S. Zeff, *Asset Appreciation, Business Income and Price Level Accounting 1918-1935* (New York: Arno Press, 1976).
[6] A. J. Dillon, "Corporate Asset Revaluations: 1925-1934," *Accounting Historians Journal* (Spring 1979): 1-15.
[7] Ibid., p. 12.
[8] Blough, "Accounting Principles," p. 13.

mary financial reports of U.S. enterprises. Rather, the SEC in Accounting Series Release 190 required the reporting of the estimated current replacement cost of inventories and productive capacity and the related effect on cost of sales and depreciation in the 10-K annual reports of companies.[9] In September 1979, the Financial Accounting Standards Board (FASB) released a statement of Financial Accounting Standards on Financial Reporting and Changing Prices (FAS 33). This statement requires the disclosure of supplementary information *inter alia* on the current cost of inventories and fixed assets. Such changes in current costs are treated as capital adjustments and are not included in income from continuing operations.[10]

The situation in both Australia and the United Kingdom differs from that in the United States. First, the regulatory authorities responsible for administering company legislation in Australia and in the United Kingdom allow financial reports that include asset revaluations. Second, professional accounting standards are phrased in such terms that allow companies to revalue assets, provided that adequate disclosure is made. Third, auditors do not qualify reports to shareholders if they include asset revaluations.

Initially, the Australian and U.K. accounting professions did not recognize asset revaluations in their recommendations on accounting principles. However, the 1958 U.K. recommendations and the similar 1963 Australian recommendations stated that:

> . . . a balance sheet is not a statement of the net worth of the undertaking, and this is normally so even where there has been a revaluation of assets and the balance sheet amounts are based on the revaluation instead of on cost.[11]

Further pronouncements of the U.K. and Australian professional bodies recognized the fact that a number of companies revalued their fixed assets, and a Proposed Statement of Accounting Standards[12] issued in September 1979 by the Australian Accounting Research Foundation formally set the ground rules for adjusting accounts for asset revaluations. The acceptance of revaluations has not been followed by pro-

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[9] Securities and Exchange Commission, "Notice of Adoption of Amendments to Regulation S-X Requiring Disclosure of Certain Replacement Cost Data" (March 23, 1976).

[10] Financial Accounting Standards Board, *Statement of Financial Accounting Standards No. 33* (Stamford, Conn.: FASB, 1979).

[11] Institute of Chartered Accountants in Australia, *Recommendations on Accounting Principles,* "I. Presentation of Balance Sheet and Profit and Loss Account" (Melbourne: ICAA, 1963), par. 4; and Institute of Chartered Accountants in England and Wales, *Recommendations on Accounting Principles,* "N18. Presentation of Balance Sheet and Profit and Loss Account" (London: ICAEW, 1958), par. 4.

[12] Australian Accounting Research Foundation, *Exposure Draft.*

fessional recommendations concerning the verification procedures to be followed in the audit of reported asset revaluations or of the financial properties which the asset revaluations represent.

Asset revaluations made by Australian and U.K. companies have been investigated in several studies. In 1957, Chambers examined asset revaluations and bonus share issues of most companies listed on Australian stock exchanges.[13] This analysis was extended in a later study to cover the period 1950 to 70.[14] The number, frequency, and total amount of asset revaluations, and the breakdown by company size were reported. Standish reported the basis of valuation of fixed assets in the 1968 financial statements of a selected number of Australian companies, and found that valuation at other than cost was commonplace in Australia.[15] Ryan, Heazlewood, and Andrew performed a study similar to that of Standish for 1975 company reports, and concluded that

> the number and time range of valuations, particularly when many of them are used with cost figures intermingled, renders virtually impossible any interpretation of the resultant amounts, clearly indicating substantial departure from historical cost.[16]

Whittington analyzed the asset revaluations made by companies in the United Kingdom, classified the revaluations by company size, and compared the profitability of companies which revalued with that of those which made no revaluations. There was little difference in the profitability of the two groups, and a higher relative number of revaluations was made in the period 1954 to 60 than in the period 1948 to 54.[17] Sharpe and Walker investigated the relationship between asset revaluations and share price movements and found that there were significant increases in share prices upon announcements of revaluations.[18] Brown and Finn questioned the results found by Sharpe and Walker, and suggested the observed results could reflect that ". . . either

[13] R. J. Chambers, "The Implications of Asset Revaluations and Bonus Share Issues," reprinted in *Accounting Finance and Management* (Sydney: Butterworths, 1969), pp. 95-124.

[14] R. J. Chambers, *Securities and Obscurities* (Melbourne: Gower Press, 1973), ch. 6.

[15] P. E. M. Standish, *Australian Financial Reporting,* Accounting Research Study No. 2 (Melbourne: Accountancy Research Foundation, 1972).

[16] J. B. Ryan, C. T. Heazlewood, and B. H. Andrew, *Australian Company Financial Reporting: 1975,* Accounting Research Study No. 7 (Melbourne: Australian Accounting Research Foundation, 1977), p. 49.

[17] G. Whittington, *The Prediction of Profitability and Other Studies of Business Behavior* (Cambridge: Cambridge University Press, 1971), pp. 59-66.

[18] I. G. Sharpe and R. G. Walker, "Asset Revaluations and Stock Market Prices," *Journal of Accounting Research* (Autumn 1975): 293-310.

current values of assets are irrelevant (i.e. stock prices are independent of them), or that Sharpe and Walker's asset revaluation announcements were not newsworthy and that other contemporaneous and relevant events occurred."[19]

Many of the studies in the accounting literature have pointed to the discretionary nature of asset revaluations and their effect on the financial indicators of a company's performance and position. Revaluations are made irregularly, and are written up to some figure usually labeled "director's valuation" or "independent valuation." There is no indication given as to whether the revaluation reflects a specific financial property (such as replacement cost, current cash equivalent, or net present value) of the assets. It is not possible to make meaningful comparisons of accounting rates of return with industry averages while the industry averages are a conglomeration of historical and revalued asset amounts, or while only some companies occasionally revalue their assets. In times of rising prices, companies which do not revalue their assets have apparently excessive rates of return on capital. Discretionary asset revaluations are not an answer to the limitations inherent in historical cost accounting when prices are changing. In the past, recommendations of the accounting profession have been derived from practice and have not necessarily attempted to present one method of accounting for particular items. Hence, the practice of asset revaluations has not been precluded by the recommendations of the professional bodies in the United Kingdom and Australasia. What is yet to be explained is why, in practice, asset revaluations have been completed and reported in company financial statements. The reasons advanced for inclusion of asset revaluations have not been substantiated. Brown and Finn concluded that "the question of whether asset revaluations per se affect stock prices cannot be answered until we understand better why asset revaluations occur . . . ."[20] Dillon also concluded that "this study has not addressed several important issues. One is management's motivation for recording asset revaluations."[21]

These questions have led to this study of one of the reasons advanced for asset revaluations: that earnings will appear to be excessive in times of rising prices when the gap between current values and historic costs of assets becomes more evident. Using data of 1,456 com-

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[19] P. Brown and F. J. Finn, "Asset Revaluations and Stock Prices: Alternative Interpretations of a Study by Sharpe and Walker," in *Share Markets and Portfolio Theory,* ed. R. Ball et al. (St. Lucia, Queensland: University of Queensland Press, 1980), p. 262.

[20] Ibid., p. 266.

[21] Dillon, "Corporate Asset Revaluations," p. 13.

panies listed on the Melbourne Stock Exchange from the period 1950 to 75, estimations have been made of the relationship, in the aggregate, between asset revaluations and various inflation indicators to test the validity of the assertion that asset revaluations are made to correct apparently excessive earnings. The results indicated that a positive and significant relationship exists between revaluations and inflation with a lag of up to four years.[22] It is the purpose of this paper to discover whether a similar positive relationship holds at the disaggregated industry level.

THE DATA

Problems were encountered in obtaining data for a disaggregated study. While revaluations by industries were readily obtainable from the information collated on the 1,456 firms, the classification of firms into particular industries presented some problems. The Australian Bureau of Statistics (ABS) treats all such information as confidential and was unable to be of help directly. For this reason, all of the firms were grouped into the Australian Standard Industry Calssification (ASIC), such groupings being based on what information could be ascertained regarding the principal type of activity in which each firm was engaged. The results were then submitted to the ABS for analysis and were found to be sufficiently accurate for use in this investigation.

The industry inflation indicators also presented problems. The industries in the ASIC groupings did not necessarily have an associated wholesale or retail price index, let alone a continuous implicit price deflator. In the next section, there will be a discussion of the various ASIC industries together with the particular retail and wholesale indices associated with those industries and of the implicit deflators which were obtainable. Unfortunately, the deflators were available only from 1960/61 to 1974/75, which meant that any ordinary least squares studies involving distributed lags will have very few degrees of freedom.[23]

All basic price index information was derived from ABS publications. In particular, the implicit deflators were obtained from *Estimates of Gross Product by Industry at Current and Constant Prices, 1959-60*

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[22] S. A. Leech, D. J. Pratt, and W. G. W. Magill, "Company Asset Revaluations and Inflation in Australia, 1950-1975," *Journal of Business Finance and Accounting* (Winter 1978): 353-62.

[23] Disaggregated implicit deflators for 1970/71 were not published by the ABS so that price deflators for that year were constructed from figures for series just preceding and succeeding 1970/71. Details of these calculations are available from the authors.

to 1965-66 (Cat. No. 7.1); and the *Australian National Accounts, Gross Products by Industry at Current and Constant Prices,* 62-63 to 73-74 (Cat. No. 7.12); and 76-77 (Cat. No. 5211.0). Inflation series were derived in each case by calculating the annual percentage change in the respective indices.

INDUSTRY RESULTS

Three types of inflation indicators were used in this industry study. The first type was based on retail price indices for food, clothing and drapery, and housing supplies and equipment.[24] There were twenty-six observations on each indicator covering the period from 1949/50 to 1974/75. Using ordinary least squares, the retail (R) food inflation indicator $P(FD)^R$ was used to explain revaluations in the food industry REV(FD); the clothing indicator $P(CL)^R$ to explain revaluations in both the textile industry REV(TEX) and the clothing industry REV(CL); while the housing indicator $P(HOUS)^R$ was applied to studies involving the constructions industry REV(CON) and the wood products and furniture industry REV(WD). The independent variables were tested using no lag, one lag, and finally two lags. The more successful results are shown in exhibit 1, where the figures in parentheses below the coefficients are the values of the respective "t" ratios.

Exhibit 1. Selected Results Using Retail Indices

$$(1)\quad REV(TEX)_t = \underset{(2.77)}{4.233} + \underset{(2.63)}{0.497}\, P(CL)_t^R \qquad R^2 = 0.223 \quad DW = 1.71$$

$$(2)\quad REV(CL)_t = \underset{(2.65)}{4.975} + \underset{(3.43)}{0.798}\, P(CL)_t^R \qquad R^2 = 0.329 \quad DW = 1.18$$

$$(3)\quad REV(WD)_t = \underset{(2.10)}{6.498} + \underset{(1.87)}{0.938}\, P(HOUS)_t^R \qquad R^2 = 0.128 \quad DW = 1.02$$

$$(4)\quad REV(CL)_t = \underset{(2.97)}{6.149} + \underset{(2.50)}{0.731}\, P(CL)_{t-1}^R \qquad R^2 = 0.214 \quad DW = 1.01$$

The results show that the clothing industry has the highest R^2 with no lag on the inflation indicator (equation 2). The "t" ratios are quite satisfactory in this as well as in the lagged relationship (equation 4). However, the Durbin-Watson statistic (DW) in equation 2 indicates that additional exogenous variables may be required. Further investigations involving lags of two and four periods failed to improve the value of R^2.

[24] Australian Bureau of Statistics, *Consumer Price Index,* Catalogue No. 6401.0 (Canberra: ABS, 1979).

The second set of inflation indicators was based on wholesale price indices.[25] These indicators, together with the industries to which they were applied, are shown in exhibit 2.

Exhibit 2. Industrial Wholesale Inflation Indicators

Index	*Industry*
Metals and Coal $P(M\&C)^W$	Mining (MIN)
" " " "	Chemicals (CHEM)
" " " "	Nonmetallic (NMET)
" " " "	Basic metals (BMET)
Building Materials $P(BM)^W$	Construction (CON)
" " "	Wood products (WP)
Foodstuffs $P(FD)^W$	Food (FD)
Textiles $P(TEX)^W$	Textiles (TEX)
" "	Clothing (CL)
Chemicals $P(CHEM)^W$	Chemicals (CHEM)

The wholesale (W) inflation indicators were available for the period 1949/50 to 66/67 only, giving eighteen observations in all. Examinations were conducted using nonlagged exogenous variables. Only three of the ten equations using wholesale inflation indicators gave significant results, two of which used the metal and coal inflation indicator. These are shown in exhibit 3.

Exhibit 3. Results Using Wholesale Price Indices

$$(5)\quad REV(CHEM)_t = \underset{(7.65)}{10.189} - \underset{(-3.13)}{0.434}\, P(M\&C)_t^{W} \quad R^2 = 0.352 \quad DW = 1.00$$

$$(6)\quad REV(NMET)_t = \underset{(7.96)}{11.036} - \underset{(-2.87)}{0.414}\, P(M\&C)_t^{W} \quad R^2 = 0.314 \quad DW = 1.52$$

$$(7)\quad REV(CHEM)_t = \underset{(5.54)}{8.459} - \underset{(-1.63)}{0.220}\, P(CHEM)_t^{W} \quad R^2 = 0.142 \quad DW = 1.02$$

Equation 7 is included to give weight to the fact that in six of the ten equations estimated using the wholesale price index, there was a negative sign on the coefficient of the inflation variable, the "t" ratios ranging from −1.16 to −3.13. All other "t" ratios were so low as to indicate no significance at any acceptable level. Because of this fact, the wholesale price index was felt to be an unsatisfactory indicator, and further studies using this variable were abandoned.

[25] Australian Bureau of Statistics, *Price Indexes of Articles Produced by Manufacturing Industry, Australia,* Catalogue No. 6412.0 (Canberra: ABS, 1979).

The third type of inflation indicator used was that based on the implicit (I) deflators associated with outputs for the agriculture $P(AG)^{I}$, entertainment $P(ENT)^{I}$, mining $P(MIN)^{I}$, wholesale and retail $P(WHOL)^{I}$, transport $P(TRAN)^{I}$, and finance industries $P(FIN)^{I}$.[26] In each case, every possible combination was estimated involving the independent variable with no lag, one lag, and two lags, making a total of seven equations for each industry. The results were a marked improvement over those for the other two types of inflation indicators, but once again there were signs indicating the possible absence of additional explanatory variables. Unfortunately, these implicit deflators were only available for the period 1963/64 to 74/75, so that there were only twelve observations at the most and ten when up to two lags were used. The best results based on R^2, for each industry, are shown in exhibit 4. If $P(AG)_{t-1}^{I}$ and $P(TRAN)_{t-1}^{I}$ were deleted from equations 8 and 12 respectively, the results would be as shown in equations 14 and 15.

It becomes apparent from exhibit 4 that there are strong grounds for asserting that the wholesale and retail, transport, entertainment, finance, and agriculture industries react significantly to movements in the prices of their own outputs insofar as their revaluation policies are concerned. Equations 8, 9 and 13 indicate that the contemporaneous reaction is very much the same in the agriculture, entertainment, and finance industries. The wholesale and retail industry reacts with a definite lag, the current independent variable being insignificantly different from zero. Equation 12 shows that revaluations in the transport industry are exceedingly sensitive to current movements in prices in that industry, while for the mining industry (equation 10), the opposite is the case. Neither of the lagged variables was *consistently* good. However, they were marginally significant in some equations, and it was this fact that warranted their inclusion in the set of equations 8-15.

SECTIONAL STUDY

An important weakness underlying these investigations using the industry-implicit deflators is the small number of observations. It should be noted that the maximum number of degrees of freedom, with only twelve observations, is ten, and when the two lagged variables are introduced, this number falls to six. (Two observations are necessarily lost as well.) Because of this, it was decided to undertake a cross-sectional study using data pertaining to fourteen industries. This involves taking the fourteen available observations on asset revaluations

[26] See previous section for sources of these series.

Exhibit 4. Selected Results Using Implicit Price Deflators

(8)	$REV(AG)_t$	=	12.293	$+ 0.571\ P(AG)^I_t$	$+ 0.352\ P(AG)^I_{t-1}$	$+ 0.290\ P(AG)^I_{t-2}$	$R^2 = 0.626$	$DW = 1.66$
			(2.53)	(1.83)	(1.01)	(0.67)		
(9)	$REV(ENT)_t$	=	−1.173	$+ 0.557\ P(ENT)^I_t$	$+ 0.449\ P(ENT)^I_{t-1}$		$R^2 = 0.697$	$DW = 2.39$
			(−0.50)	(1.99)	(1.16)			
(10)	$REV(MIN)_t$	=	4.330	$+ 0.201\ P(MIN)^I_t$		$- 0.170\ P(MIN)^I_{t-2}$	$R^2 = 0.423$	$DW = 1.76$
			(3.62)	(1.87)		(−1.56)		
(11)	$REV(WHOL)_t$	=	0.396		$+ 1.554\ P(WHOL)^I_{t-1}$	$+ 1.416\ P(WHOL)^I_{t-2}$	$R^2 = 0.734$	$DW = 2.05$
			(0.11)		(2.13)	(1.57)		
(12)	$REV(TRAN)_t$	=	−14.878	$+ 1.250\ P(TRAN)^I_t$	$+ 2.195\ P(TRAN)^I_{t-1}$	$+ 4.360\ P(TRAN)^I_{t-2}$	$R^2 = 0.725$	$DW = 1.53$
			(−1.78)	(1.56)	(1.54)	(3.02)		
(13)	$REV(FIN)_t$	=	0.671	$+ 0.593\ P(FIN)^I_t$		$+ 0.458\ P(FIN)^I_{t-2}$	$R^2 = 0.653$	$DW = 2.07$
			(0.24)	(2.85)		(1.80)		
(14)	$REV(AG)_t$	=	12.310	$+ 0.754\ P(AG)^I_t$	$+ 0.594\ P(AG)^I_{t-2}$		$R^2 = 0.561$	$DW = 1.65$
			(2.53)	(2.95)	(1.87)			
			(−0.03)	(1.82)	$+ 4.324\ P(TRAN)^I_{t-2}$		$R^2 = 0.616$	$DW = 2.20$
(15)	$REV(TRAN)_t$	=	−7.951	$+ 1.553\ P(TRAN)^I_t$	(2.74)			

for each industry and deriving a series consisting of 196 total observations. The same procedure is also conducted with respect to observations on the relevant implicit deflators. If revaluations were denoted by the random variable Y and the inflation variable, based on implicit deflators, by X, then in the first instance, we are concerned with a bivariate investigation in which we estimate $\hat{Y}_t = \hat{\alpha}_0 + \hat{\alpha}_1 X_t$ using 196 pairs of observations on the two random variables. Complications necessarily arise when lags are introduced. For example, if the independent variable is lagged two periods, then the first two observations on the independent variable and the last two observations on the dependent variable are lost for *each* industry. This makes a total loss, given a two-period lag, of twenty-eight observations on each variable. Similarly, a four-period lag would incur a loss of fifty-six observations. When *both* X_{t-2} and X_{t-4} are included, the first two and last two observations for each industry are lost in the first case, and the first four observations in the second.

The fourteen industries for which data were used are agriculture, mining, manufacturing, construction, transport, finance, food, textiles, clothing, wood and wood products, paper, chemicals, basic metals, and miscellaneous manufacturing. Results obtained are shown in exhibit 5 where the superscript S indicates the variables are specified

Exhibit 5. Regressions Using Cross-Sectional Industry Data

(16)	$REV^S_t = \underset{(9.70)}{8.828} + \underset{(7.78)}{0.780}\, P^S_t$	$R^2 = 0.238$	$DW = 1.21$	$N = 196$
(17)	$REV^S_t = \underset{(10.52)}{11.643} + \underset{(3.02)}{0.519}\, P^S_{t-2}$	$R^2 = 0.052$	$DW = 0.99$	$N = 168$
(18)	$REV^S_t = \underset{(0.31)}{12.823} + \underset{(2.42)}{0.467}\, P^S_{t-2} + \underset{(0.45)}{0.117}\, P^S_{t-4}$	$R^2 = 0.045$	$DW = 1.02$	$N = 140$

in cross-sectional form. It becomes immediately apparent that two- and four-period lags in the cross-section inflation indicator contribute very little to the explanation of revaluations at the industry level. Equation 16 supports the hypothesis that additional independent variables need to be specified. The constant term and the coefficient on the implicit deflator are both highly significant, but R^2 is relatively low, and the Durbin-Watson statistic reflects a positive serial correlation in the residuals.

Further investigations involving combinations of one-, two-, and four-period lags using sectional data generated the following results.

$$(19)\quad REV_t^s = \underset{(8.66)}{9.769} + \underset{(4.48)}{0.655}\, P_{t-1}^{s} + \underset{(1.72)}{0.293}\, P_{t-2}^{s} \qquad R^2 = 0.155,\ DW = 1.06,\ N = 168$$

$$(20)\quad REV_t^s = \underset{(7.34)}{10.906} + \underset{(2.97)}{0.494}\, P_{t-1}^{s} + \underset{(1.67)}{0.324}\, P_{t-2}^{s} + \underset{(0.73)}{0.184}\, P_{t-4}^{s} \qquad R^2 = 0.103,\ DW = 1.04,\ N = 140$$

Once again, the four-period lag is insignificantly different from zero. However, the one-period lag is highly significant, and the two-period lag is marginally so. F tests prove to be satisfactory in both cases and this, together with a low R^2 and indications of positive serial correlation, further supports the hypothesis that additional explanatory variables are required.

CONCLUSIONS

The purpose of this study was to discover whether a positive and significant relationship exists between asset revaluations and inflation at the industry level in Australia — the objective being to test the validity of the assertion that asset revaluations are made to correct apparently excessive earnings in various industries. Using the implicit price deflator for gross product of each industry as the basis for inflation, the results indicated that, in six of the fourteen industries investigated, there is a significant reaction by companies to revalue their assets upwards as a consequence of increases in the prices of their own outputs.

The nature of the reaction varies between industries. In some cases, it was found that there was a significant response to price changes in the current period (particularly in the agriculture, entertainment, and finance industries), while in others, there was evidence of a lag of one or two years. However, it was apparent that the relationships under investigation were underspecified. Further research to include additional explanatory variables is required before any satisfactory explanation can be made as to why asset revaluations occur.

International Accounting Standards and the EEC Harmonization Program: A Conflict of Disparate Objectives

DESMOND McCOMB*

During the 1970s, much effort was devoted to harmonizing corporate reporting standards on an international level. Many forces have contributed to developments in this area of accounting; three of the more influential will be discussed here.

One factor is the increasing internationalization of trade and industry, in particular the growth in the proportion of world production and commerce conducted by transnational companies. In relation to accounting, these organizations have been faced with a dual problem of producing financial reports which conform to the requirements of the host countries in which they operate, while at the same time preparing accounting information on a fully compatible basis for purposes of overall corporate planning, and for consolidation in group accounts. To the extent that diversity of accounting principles and/or practice exist in the countries in which operations are based, the task of preparing accounts for internal managerial use, or for reporting group results, is complicated. Transnational corporations have, therefore, a strong incentive to foster the development of internationally acceptable standards of accounting.

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A second force is the growing importance of international money and capital markets. An increasing number of companies wishing to raise funds by the issue of securities have been forced to comply with the financial disclosure requirements of the markets concerned. Thus, with the trend among transnational companies toward a growing acceptance of their supranational character, an increasing number of them have sought to issue bonds or stocks upon security markets other than those of their home country. Such companies, seeking quotations on the London or New York stock exchanges, for example, have found it necessary to comply with the financial disclosure requirements which are a precondition for quotation. Similarly, companies seeking to borrow on the Eurobond market have exhibited evidence of a willingness to adapt their accounting disclosure practices to those of the wider community of international companies.[1]

A third influence is the awareness by professional accounting bodies throughout the world that the existence of incompatible standards of accounting in various countries casts doubts upon any aspirations which accounting as a discipline might have in order to be regarded as a universally understood language of finance. This has provided an incentive for international cooperation by the profession in establishing universally acceptable standards of accounting.

This forward-looking position was a response to the first two forces described, but it was also part of a wider political response to pressures emanating from the governments of various countries throughout the world as well as from international organizations such as the United Nations and the Organization for Economic Co-operation and Development.

INTERNATIONAL ACCOUNTING ORGANIZATIONS

The main effects of professional activities in promoting an international framework for accounting development have been comprehensively recorded by those intimately concerned with coordinating the work of the national accountancy bodies, and by academic writers.[2]

[1] Frederick D. S. Choi, "Financial Disclosure and Entry to the European Capital Market," *Journal of Accounting Research* (Autumn 1973): 159-75; and "European Disclosure: The Competitive Disclosure Hypothesis," *Journal of Internaltional Business Studies* (Fall 1974): 15-23.

[2] Sir Henry Benson, "The Story of International Accounting Standards," *Accountancy* (July 1976); Joseph P. Cummings and Michael N. Chetkovich, "World Accounting Enters a New Era," *Journal of Accountancy* (April 1978); Gerhard G. Mueller, "International Accounting Standards" (Paper presented at the Accounting Research Convocation, University of Alabama, 1977); and Hanns-Martin Schoenfeld, "Harmonization of Accounting," in *Accounting for Multinational Enterprises*, ed. Dhia D. AlHashim and James W. Robertson (Indianapolis: Bobbs-Merrill Educational Publishing, 1978).

The eventual result of the efforts of all concerned has been the establishment of the International Federation of Accountants (IFAC) and the International Accounting Standards Committee (IASC). The manner in which these two organizations function is well known and does not require elaboration. It is of interest, however, to examine their potentials for achieving their stated objectives and purposes, in the context of the political and social environment which characterizes the contemporary accounting scene. Consideration is restricted to the relationship between what is regarded by the accountancy profession as the functions of IFAC and IASC, and the accounting harmonization program of the European Economic Community (EEC), representing as it does ten countries (Belgium, Denmark, France, Greece, Ireland, Italy, Luxenburg, the Netherlands, the United Kingdom, and West Germany). These together have a population of around 260 million and a gross domestic product of over $1,600 milliards. They constitute a major economic and political grouping of developed countries without whose acquiescence any framework of international accounting standards would be meaningless.

Political forces which may be a constraint upon the international harmonization of accounting are by no means a phenomenon applying uniquely to the EEC countries. What the EEC represents, however, is a complex organization of separate nations which is itself dedicated to internal harmonization of the economic affairs of the member countries, and which in the process intends to harmonize accounting and corporate reporting within the community. This harmonization policy of the EEC would appear to be very much in accord with the objectives of IFAC and IASC and, to the extent that corporate reporting in the ten member countries is made to conform to common guidelines, it is certainly the case that some degree of international standardization will have been achieved. However, the objectives of the EEC harmonization policies have been established within the context of the wider political, economic, and social objectives of the community, and it is open to question whether those policies are compatible with the aims of the accounting standards program of the IASC.

THE REGULATION OF ACCOUNTING IN THE EEC

As part of its broad objective of establishing a closer economic and political union among the European peoples, the EEC Council of Ministers has accepted as an aim "the creation of a unified business environment, involving the harmonisation of company law and taxa-

tion, and the creation of a community capital market."[3] The accounting harmonization program is a product of that wider aim. However, although the professional bodies of the member countries are in a position to make their views felt, the profession does not play a direct part in formulating rules for accounting within the community. Rather, these are developed and promulgated as part of the community program of company law harmonization.

DETERRENTS TO THE HARMONIZATION OF EEC ACCOUNTING

Despite their geographical proximity, European countries exhibit wide differences among their political, legal, social, and economic characteristics. Constraints on the elimination of diversity in accounting and financial reporting arise from such differences, and may be classified as resulting from sociopolitical attitudes; institutional pressures; differences in the organization of the profession of accountant and auditor, and in the status of the profession; and differences in perceived objectives of financial reporting.

To some extent, the latter constraint is a reflection of those which precede it. However, it provides a link with the broad conceptual issues involved in the propagation of international accounting standards and merits separate consideration.

Sociopolitical Attitudes

Public attitudes concerning the organization and control of society vary considerably among the EEC countries. Insofar as these impact upon economic life, and in particular upon the regulation and expectations of accounting, each member country exhibits individual characteristics which differentiate it in greater or lesser degree from its partners in the EEC. To some extent, these reflect such factors as population size and degree of industrialization. The United Kingdom and Ireland, for example, share a common law-based legal system, and a broadly laissez-faire approach to government, under which legislation regarding companies and financial disclosure broadly concerns establishing a basic framework of minimum standards, while leaving the implementation of detailed rule making to those who achieve expert status through experience. Thus the stock exchanges, the banking community, and the professions, including the accountancy profession, have traditionally been encouraged to participate in the regulatory processes of both countries. Nevertheless, the smaller size of most Irish companies, and of the Irish economy, results in a distinct orientation of interest in

[3] Commission of the European Communities, "Industrial Policy and the European Community" (November 1972), p. 5.

financial disclosure which distinguishes it from its larger neighbor. By contrast, some other European countries lean toward a much more prescriptive approach in the regulation of their economies, and of the industries and organizations which are responsible for the generation of wealth.

In France, this results in a regulation of corporate accounting and financial disclosure, whereby the formal framework of the General Accounting Plan is imposed as a mandatory system of accounting. A uniform system of bookkeeping and financial reporting is not only imposed from above, but the principles of accounting are also set in the Accounting Plan, which is designed as a tool for the advancement of general economic planning by the state.

A similar, if less thorough, prescriptive approach is found in Germany's commercial code, Public Corporation Law 1965, and tax laws which contain regulations and formal rules concerning proper bookkeeping and accounting principles. By contrast, the guiding principles of corporate reporting in the Netherlands are "good commercial practice," while other member countries exhibit prescriptive or laissez-faire attitudes in varying degree.

Institutional Pressures

The pressures for disclosure of financial information, and the scale and quality of such disclosure, are very much influenced by the relative importance of the various economic and financial institutions of individual countries. Of prime significance in this connection is the manner by which corporate manufacturing and trading activities are financed, and in particular the degree to which each source of finance is used in the various countries concerned. In this respect, the ten countries of the EEC show clear evidence of wide differences in the manner by which savings are matched with capital formation.

The United Kingdom, like the United States, has an active open capital market which may be tapped by companies seeking to borrow funds, or to issue new equity share capital. Parallel to this, the secondary market provided by the Stock Exchange is among the world's more significant. This has resulted in a continuous influence being exercised upon the provision of financial information for investor uses. It could indeed be said that over time, the requirements of the Stock Exchange for information concerning quoted companies have become of greater significance in the development of new forms of reporting and encouraging improvements in the quantity and quality of financial information provided by companies, than have successive companies acts, each of which set more stringent requirements for cor-

porate disclosure. This, it is suggested, is because it has been customary in the United Kingdom for corporate legislation to respond to public need rather than for the legislators to attempt to decide what it should be in the light of governmental objectives, as is the continental custom. In that context, the Stock Exchange disclosure needs have tended to respond to investor information demands in a more prompt and flexible manner than could government legislation. Of course, it may also be argued that the Council of the Stock Exchange understands such needs better than could politicians or bureaucrats. However, influence can be exercised only if the body concerned has power, in other words, if as in this case it provides an irreplaceable source of funds for industrial and commercial investment. That is not the case for the most part in some of the other EEC countries.

It is beyond the scope of this paper to expand on the institutional forces at work in the remaining nine EEC countries. France and Germany are chosen, therefore, as examples of differences in institutional pressures.

France has never had an effective open capital market. In recent years, the government there has attempted to encourage greater use of the Paris Bourse as a source of new funds for industry, and the Paris Stock Exchange is undoubtedly the most active in Europe apart from that in London. Nevertheless, it remains no more than a marginal source of finance as far as seekers of new funds for capital investment are concerned, and it provides only a comparatively minor secondary market in securities already on issue. By contrast, the French banks, which are largely state controlled, provide a significant amount of funds in the form of loans to industrial and commercial groups. As a result, very little pressure has, or could be, exercised upon companies to provide investor-oriented corporate reports. Again, since only a very few companies are capable of being influenced by the information demands of the Paris Bourse, most pressures for improvements in corporate disclosure have come from the government and its bureaucrats, whose information requirements have generally been macro oriented.

Germany is also a country in which the banks play a major role in the provision of corporate finance. On a somewhat inactive capital market, they are the main dealers in securities, either in their capacity as stockholders in their own right, or as proxy holders for their customers. They are also major providers of long-term loan finance, and in this regard, it is a significant feature of the system of corporate financing in West Germany that the ratio of long-term liabilities to

shareholder funds is approximately 4 to 1. This and the strong influence of the banks are reflected in corporate accounting by an emphasis upon solvency, and a tendency toward conservative methods of asset valuation and revenue recognition. Legislation also emphasizes that tendency. It specifies in some detail the records which must be maintained and the information which must be published. Also, the tax laws link the recognition of expenses for tax purposes with both the records kept and the financial reports published. In this context, the pressures are upon strict compliance with the law rather than upon the quality of information.

It can be argued that these institutional differences exercise a profound influence in establishing the thrust of financial reporting in the three countries concerned, and that this is sufficiently strong to negate the effects of prescriptive action to harmonize their accounting.

The Accounting Profession

The organization, numerical strength, and status of the profession differ considerably among European countries. A proposed Eighth Directive of the EEC seeks to regulate the minimum professional and educational standards which should be satisfied by persons who perform statutory audits. However, the very real differences which currently exist cannot be dissociated from the standards of financial reporting in the member countries of the community. A particularly notable distinction between European countries relates to the status of auditors. In general, members of the professional accountancy bodies conduct audit work, but in some countries an auditor's status is lower than that of the professional accountant. Thus in France, auditors have only recently been required to have any qualification; this is also true in Italy. This lower status of auditing is in large measure a reflection of the expectation which society in such countries has had of auditors. Since their duties in some of the EEC countries have been confined to certifying compliance with legal requirements, the audit function has naturally been held in lower public esteem than it is in countries where an auditor was expected to express an opinion on the quality of the information provided in corporate financial reports. Both Germany and France suffer also from not having a sufficient number of suitably qualified auditors to meet the high standards of the attest function as understood in the United Kingdom and the United States. This is despite the high qualifications, both academic and professional, of the existing members of the profession. A similar situation applies in Belgium and Italy.

OBJECTIVES OF FINANCIAL REPORTING

As previously indicated, differences in the objectives of financial reporting result largely from variations in sociopolitical attitudes, institutional pressures, and in the organization of the accounting profession.

In terms of economic objectives, the accounting orientation of the ten EEC countries broadly separates into either a micro or a macro orientation. The Netherlands, the United Kingdom, and Ireland fall into the micro group, and the other seven in varying degrees into the macro group. It has been suggested that international accounting patterns also exhibit two other groupings, "the independent discipline approach" and "the uniform accounting approach."[4] However, the EEC countries which fit into the former group (the United Kingdom and Ireland) also exhibit a micro orientation in their accounting, even though it has developed a pragmatic rather than an intellectual manner, while those in the latter group, of which France is the prime example, have a broad macro orientation. This is perhaps a fairly rough division; indeed, Italy has been included in the macro group only because the fiscal content of its regulatory framework of accounting suggests that it might develop along such lines. Having posited these groupings, the question to be raised is whether they are of any relevance as a guide to a perception of the objectives of corporate reporting. It is suggested that they do provide some guidance.

The three countries whose accounting has been classified as micro oriented are also those in which the identification of accounting objectives and the development of relevant principles have been seen as the province of the accounting profession, it having been generally accepted that accountants would identify the information needs of users of corporate financial reports, and respond accordingly. Inherent in such a philosophy of the development of objectives is the belief that they arise from the environment of corporate reporting and reflect continually evolving user information needs. By inference, such objectives cannot be definitively formulated and set as permanent guidelines for future developments. This does not mean that the process of identifying them is useless, or that awareness of a contemporary consensus judgment upon what the objectives are, and what ranking should be given to them, will be of no help in further developments. Rather, it implies that as the social, economic, and political environment changes, so also do the ground rules under which the objectives are formulated. It is therefore difficult to make

[4] Gerhard G. Mueller, *International Accounting* (New York: Macmillan, 1967), p. 16.

positive statements upon the objectives of accounting at any point of time in such circumstances. However, in the United Kingdom, two independent attempts have been made to do so in recent years, one by a committee appointed by the Accounting Standards Steering Committee "to re-examine the scope and aims of published financial reports in the light of modern needs and conditions," and the other a parliamentary committee to inquire into accounting for inflation, but which had also in its terms of reference an instruction to take account of "the requirements of investors, creditors, employees, Government and the public for information."

The outcome of the former committee's work, The Corporate Report, stated

> the fundamental objective of corporate reports is to communicate economic measurements of and information about the resources and performance of the reporting entity useful to those having reasonable rights to such information.[5]

The groups having reasonable rights to information were then ranked as follows: equity investors, loan creditors, employees, analyst advisors, business contacts, the government, and the public.

The Inflation Accounting Committee Report, while not directly concerned with the broad objectives of accounting, also identified users of corporate financial reports and ranked them as shareholders, investment analysts, the city (Stock Exchange, and so on), creditors and lenders, other companies, employees, the government and official bodies, and the general public.[6]

Now, although neither committee claimed to have made a positive ranking of users in terms of importance, it is, this author suggests, significant that both have placed the investor and creditor groups at the beginning of their lists, and the government and general public groups at the end.

By contrast, the stated objectives of the French Plan Comptable are to

Promote more reliable national economic and fiscal policies;
Assist in eliminating fiscal inequalities;
Minimize social misunderstandings by informing the public of the true distribution of national wealth;
Provide data for the study of market trends;
Improve healthy competition;

[5] Accounting Standards Steering Committee, *The Corporate Report* (London: Institute of Chartered Accountants in England and Wales, 1975), p. 28.
[6] Inflation Accounting Committee, *Inflation Accounting* (London: Her Majesty's Stationery Office, 1975).

Aid in the development of more equitable taxation;
Provide shareholders, suppliers, and bankers with an opportunity to exercise their judgment more satisfactorily;
Aid government authorities in exercising controls;
Provide a clear and prompt view of financial results; and
Permit analysis and comparison of manufacturing costs.

It is clear that the macroaccounting objectives of the French plan bear little similarity to those postulated by the two U.K. committees. More than that, the basic opposition in the focus of the micro and macro systems of accounting as represented by the ranking of an emphasis given to the various objectives postulated implies a high degree of incompatibility between them. With such divergent philosophies of accounting, it is tempting to say that even the measurement of the same event has a high likelihood of producing a different numerical result. Even if this did not happen, the final interpretation of the accounting data base in terms of the corporate financial accounts and report would almost certainly result in different information being highlighted.

It seems probable that the objectives of accounting as viewed in the United Kingdom and in France represent two extreme poles of contemporary theory and practice among EEC countries, and that the level of incompatibility is at its maximum where those two countries' philosophies of corporate financial reporting are concerned. However, it cannot be implied from this conclusion that a policy of accounting harmonization within the EEC should suggest favoring some intermediate model. There are many drawbacks to the middle course approach. Probably the strongest on a pragmatic level relates to the existing standards of financial reporting in the member countries. There is no doubt that there are wide disparities in the quality of information provided in each country. In that context, it would be unreasonable to expect countries which already produce corporate reports at a high level in terms of information content to allow their accounting objectives to be reoriented to conform with a less tried or proven philosophy of corporate reporting. This is a factor likely to hinder the EEC harmonization policy in a way which does not apply to the policies of the IASC.

DEVELOPING INTERNATIONAL STANDARDS IN THE CONTEXT OF DISPARATE OBJECTIVES

Disparate objectives of accounting such as are found among European countries have obvious implications for the EEC harmonization program. They are also a factor of relevance to the International Ac-

counting Standards program, which is broadly concerned with removing unnecessary differences in accounting principles and practice throughout the world. Less obvious, but of significance, is the scope for conflict between the EEC accounting harmonization program and that of the IASC. In an earlier paper,[7] this author referred to two factors which operate as constraints upon the processes of the international harmonization of accounting theory and practice, namely, variations in perception of the objectives of corporate business organizations, and differences in what are regarded as the ranking of the objectives of accounting for corporate business organizations. The latter factor, as evidenced in this paper, constitutes a major constraint upon harmonization within the EEC. It would also place a brake upon the implementation of international standards.

The former constraint, however, is more fundamental since the objectives of accounting, in the context of the IASC program, derive their relevance from those of the corporate business organizations whose financial affairs are the subject of corporate reporting. The EEC harmonization policies, on the other hand, derive their thrust from the objectives of the common industrial policy. As stated by the Commission of the European Communities, these are as follows:

1. The removal of the remaining barriers to the establishment of a single market embracing the whole Community;
2. The creation of a unified business environment, involving the harmonisation of company law and taxation, and the creation of a Community capital market;
3. The reorganisation of industry to take account of the dimensions of the Common Market;
4. The promotion of technological progress in the Community;
5. The need to recognize the social and regional aspects of industrial development.[8]

When the program of directives on accounting is viewed in the context of the policies just outlined, and in particular those under points 2 and 3, it is clear that the commission's perception of the relation between corporate business and government is a very different one from that normally accepted as the framework within which Anglo-American corporate financial reporting theory has developed. In the EEC framework, corporate reporting is envisaged as a tool of bureaucratic planning rather than, as in the U.K./U.S. model, a source of information for decision making by investors, creditors, employees, and so on.

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[7] Desmond McComb, "The International Harmonization of Accounting: A Cultural Dimension," *International Journal of Accounting* (Spring 1979).
[8] Commission of European Communities, "Industrial Policy," p. 5.

The most significant development in EEC legislation affecting accounting has been the adoption of the Fourth Directive on Company Law by the EEC Council of Ministers on July 25, 1978. "The intention of the Directive is the harmonization of the content presentation and publication of the annual accounts of limited companies and of the valuation methods used in preparing these accounts."[9] In itself, this is very much in accord with the broad objectives of the international accounting standards promulgated by the IASC. However, when the detail of the directive is examined, major differences of emphasis become clear. In the preamble to the directive, for example, the following clause gives some indication of a viewpoint with which many would cavil. It reads:

> . . . annual accounts must give a true and fair view of a company's assets and liabilities, financial position and profit or loss; whereas to this end a mandatory layout must be prescribed for the balance sheet and profit and loss account. . . .

While a mandatory format need not prevent accounts giving a "true and fair" view, few would hold that it is a necessary prerequisite for achieving that end. In fact, it seems clear that the introduction of the phrase "true and fair" was no more than a compromise to the views of the United Kingdom, Ireland, and the Netherlands. The first draft based on the original German version read more rationally as

> . . . the annual accounts must reflect as accurately as possible the company's assets and liabilities, financial position and results; whereas to this end a layout comprising items that in principle are obligatory must be prescribed for drawing up the balance sheet and profit loss account. . . .

The directive also contains detailed rules for the valuation of assets and liabilities "to ensure that annual accounts disclose comparable and equivalent information," an objective which seems parallel with that of the IASC international standards. Despite this, however, the effect may be to place further obstacles in the way of the development of the IASC program. The latter was based upon an Anglo-American view of corporate reporting, in which improvements and developments take place in the context of a flexible response by an enlightened accounting profession in the context of a continually evolving business, economic, and political environment. However, the prescriptive approach favored by some European countries has emphasized legal compliance as an end in itself. That attitude is reinforced by EEC legislation. Countries like the United Kingdom may

[9] *Company Accounting and Disclosure* (London: Her Majesty's Stationery Office, 1979), p. 9.

continue to adopt a relaxed approach to legal rules on asset valuation, but cannot disregard them. Others may, and almost certainly will, apply them literally and rigidly. The effects of the EEC company law harmonization are therefore likely to be stultifying as far as the implementation of international accounting standards is concerned. Even before the Fourth Directive was adopted, some European countries were slow to implement international standards, in particular standards whose adoption could give rise to difficulties, such as those arising from a desire to adhere to the principle of a common base for fiscal and corporate reporting purposes. That rigidity must now be compounded by the EEC Commission's dedication to regional coordination of the form, rather than the substance and purpose of corporate reports.

Comparison also of the factors which gave impetus to the formation of the IASC — the increasing internationalism of business, the growth of international capital markets, and the emerging international stance of the accountancy profession — with the objectives of the EEC harmonization program, highlights the incompatibility of the underlying philosophy of the two approaches.

The IASC program is essentially based upon improving the quality of financial information for the use of management, investors, and other individual or group users of corporate reports. The means chosen to achieve this have been the gradual application of international standards of accounting practice by the professional bodies of the member countries. Inherent in this approach is the assumption that methods of applying international standards would be developed by the profession of each country in light of their knowledge of both local conditions and the aims of each particular standard. Essentially, such flexibility is designed to improve international comparability of corporate reporting. However, the advantages sought have been quite clearly those of improving the quality of financial information for the microeconomic decision needs of users in the international market place.

The macroeconomic slant of the EEC harmonization program must pose an obstacle to the development of IASC activities in Europe, as will the involvement of the EEC Commission in legislating accounting principles and practice. In the context of the economic importance of the community, it would, however, be pointless to proceed with an international accounting standards program which could not readily be implemented in Europe. More generally, some recognition of this issue of the compatibility of international accounting standards with accounting objectives in the many countries which subscribe to the

overall conceptual basis for the existence of the IASC is critical to the future success of its activities. In many countries, the accountancy profession is not in a position to exercise a direct influence upon the promulgation of standards of accounting. The acceptance of international standards by the profession in those countries is therefore a symbolic act at best, since the power to implement such standards lies elsewhere.

The resolution of these issues must lie as much in the political as in the accounting arena. It is becoming difficult to ignore the interface between accounting and politics. It has been an issue on a domestic level in many countries for some years,[10] and the profession may have to adopt an international political stance in this decade. The accommodation of the objectives of the International Accounting Standards Program to EEC company law harmonization policies may provide an early test of its will and ability to do so.

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The Statement of Changes in Financial Position: An Empirical Investigation of Canadian and U.S. Users in Nonpublic Companies

G. R. CHESLEY and J. H. SCHEINER*

The usefulness of the statement of changes in financial position, more commonly referred to as the funds statement, has been the subject of much debate in the literature. Its inclusion as part of a basic set of financial statements by the Accounting Principals Board, the Canadian Institute of Chartered Accountants, and the International Accounting Standards Committee has not stopped related criticism. Central to this criticism has been an objection to the definition of working capital. Several recent articles[1] and a research monograph[2] have questioned

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[1] L. Heath, "Let's Scrap the 'Funds' Statement," *Journal of Accountancy* (October 1978): 94-103; and L. Heath and P. Rosenfeld, "Solvency: The Forgotten Half of Financial Reporting," *Journal of Accountancy* (January 1979).

[2] L. Heath, *Financial Reporting and the Evaluation of Solvency*, Accounting Research Monograph No. 3 (New York: American Institute of Certified Public Accountants, 1978).

the working capital concept and the statement's usefulness. Similar criticisms had been voiced earlier.[3]

The Financial Accounting Standards Board (FASB) in its first Statement of Financial Accounting Concepts, *Objectives of Financial Reporting by Business Enterprises,* emphasized the importance of providing information that is useful in assessing cash flow prospects. The FASB stated:

> Financial reporting should provide information about the economic resources of an enterprise, the claims to those resources and the effects of transactions, events and circumstances that change its resources and claims to those resources.

The purpose of this paper is to examine empirically the usefulness and understandability of the funds statement to one important user group, officers (owners) of smaller businesses in Canada and the United States. Potential differences in the needs of financial statement users of smaller (nonpublic) businesses compared to public companies had previously been recognized by the FASB and the American Institute of Certified Public Accountants (AICPA). In 1978, the FASB responded to criticisms that newer disclosure rules were largely irrelevant and costly for nonpublic firms by suspending earnings per share and segment information disclosures for nonpublic firms. In 1979, the AICPA instituted two new types of reports, compilation and review, to replace unaudited reports for nonpublic firms. Given the growing distinction between public and nonpublic companies, this paper will examine the usefulness of a basic financial statement to one important user group. These users tend to be considered less sophisticated than other potential users of a public firm's financial statements. If this group does understand and use the statement of changes in financial position, more sophisticated users should also understand it. If this group does not understand or use the statement of changes in financial position, the profession must make improvements in the statement for nonpublic firms.

METHODOLOGY

To solicit the views over a relatively wide spectrum, a questionnaire approach was adopted in order to obtain opinions from a group of such size that precluded the use of other methodologies. Two geographical locations were selected in order to provide a more repre-

[3] E. B. Day, "Cash-Balance Approach to Funds Statement Promotes Clarity in Financial Report," *Journal of Accountancy* (April 1951); and R. D. Bradish, "Corporate Reporting and the Financial Analyst," *Accounting Review* (October 1965): 757-66.

sentative sample from two similar yet different accounting, educational, and jurisdictional areas. A random sample of 246 small Canadian manufacturers was selected from the Nova Scotia Directory of Manufacturers. A second random sample of 250 mixed companies was obtained from the Dun and Bradstreet Middle Market Directory using firms located in the southeastern United States. To control size and to ensure availability of accounting statements, publicly traded companies, branches, and subsidiaries were excluded.

The questionnaire package contained a cover letter addressed to the executive officer listed in the respective directory and a stamped return envelope. Letters were individually typed and signed by the researcher from the respective location. Each letter asked the party to complete the questionnaire or to send it to an appropriate person within the organization. Second requests were mailed after a reasonable elapsed time.

The questionnaire contained three parts. First, the demographic characteristics of the respondent and the company were obtained. Second, usefulness was addressed using both direct ratings and indirect questions concerning what was used to undertake various tasks. Third, understanding was assessed by providing a sample statement of changes in financial position and by asking questions regarding various items listed on the sample statement. This approach was selected to help assure comparability of stimulus for these questions. The questionnaire contained twenty-five questions. Because of the two juristictions, care was taken to change terminology to be consistent with the respective environment, yet to address the same issues.

RESULTS

Nonresponse Bias

Ninety-five Canadian and seventy-six U.S. responses were received. As with any questionnaire study, the authors attempted to ascertain the nature of the responses they would likely have received from the nonrespondent. First, the responses to the first and second requests were compared. The company profiles and response patterns suggested the second request responses were from smaller firms who had somewhat more difficulty responding than did the first request group. The second approach used to study nonresponses was to analyze the number of employees of respondents and nonrespondents. As exhibit 1 indicates, in the Canadian case, the nonrespondents represented companies that were significantly smaller at the .02 level than respondents' companies.[4]

[4] W. L. Hayes, *Statistics for the Social Sciences* (New York: Holt, Rinehart and Winston, 1973).

For the U.S. sample, this difference was not significant. Phone calls to a sample of approximately twenty Canadian nonrespondents did not yield any single reason for their failure to answer the questionnaire. On the basis of the analysis, the authors concluded that the nonresponse group was smaller in size and certainly had no greater ability to understand the statements than did the response group.

Demographic Profile

The demographic profile of respondents investigated two factors: size of company, and the position and background of the respondents (see exhibits 1 and 2). The size of companies was assessed by the dollars of total assets and the number of employees. As the significance test suggests, the U.S. companies were larger with 69 percent having assets over \$1,000,000 while only 25 percent of the Canadian respondents were in this size range. The factor of number of employees presents a

Exhibit 1. Profile of Respondent Companies

Total assets	*Number* *Canadian*	*U.S.*	*Percent of responses* *Canadian*	*U.S.*
\$0–\$50,000	7	2	8	3
\$50,000+–100,000	14	0	15	0
\$100,000+–500,000	31	3	34	4
\$500,000+–1,000,000	16	18	18	24
\$1,000,000+–	23	51	25	69
No answer	4	2	—	
Total respondents	95	76	100	100

$\chi^2 = 49.72$; df = 5; $\alpha < .001$

	Respondents				*Nonrespondents*			
	Number		*Percent*		*Number*		*Percent*	
*Employees**	*Canadian*	*U.S.*	*Canadian*	*U.S.*	*Canadian*	*U.S.*	*Canadian*	*U.S.*
0–10	44	0	46	0	71	0	47	0
11–40	29	18	31	24	58	31	39	18
41–100	19	38	20	50	11	105	7	60
101–	3	20	3	26	11	38	7	22
	95	76	100	100	151	174	100	100

	χ^2	*df*	α
Respondents vs. Nonrespondents — Canadian	10.51	3	$<.025$
— U.S.	2.38	2	$>.5$
Respondents — Canadian vs. U.S.	64.15	3	$<.001$
Nonrespondents — Canadian vs. U.S.	169.46	3	$<.001$

* Source: *Nova Scotia Directory of Manufacturers* (Nova Scotia Department of Development, 1978), and *Middle Market Directory, 1978* (New York: Dun & Bradstreet, 1978).

similar profile. Of the U.S. companies, 76 percent had more than forty employees, compared to only 23 percent of the Canadian respondents. While all Canadian companies were manufacturers, the U.S. sample contained merchandising and service companies. Only 37 percent of the U.S. sample were involved in manufacturing. Forty-eight percent were retailing or wholesaling firms.

The positions held by the respondents were similar for both groups. In each case, at least half were presidents or general managers. The U.S. group had more formal education than their Canadian counterparts. In each case, 31 percent obtained their accounting training on the job.

Usefulness

The direct assessment of perceived usefulness is reported in exhibit 3. Both groups claimed they used the funds statement. The U.S. firms reported a significantly more frequent preparation of statements. Sixty-five percent said they had monthly statements compared to only 34 percent for the Canadian sample. Analysis of the Canadian sample by size of assets indicated the monthly statements were all for firms having assets over $100,000. Similar conclusions to another question concerning how companies assess liquidity are evident. Sixty percent of U.S. respondents reported the use of their records compared to 34

Exhibit 2. Profile of Respondents

	Number		*Percent*	
Job classification	*Canadian*	*U.S.*	*Canadian*	*U.S.*
President/General manager	50	38	53	50
Vice president	8	8	8	11
Secretary/Treasurer	16	13	17	17
Controller/Accountant	18	10	19	13
Other	3	7	3	9
	95	76	100	100

$\chi^2 = 3.77$; df $= 4$; $\alpha > .5$

	Number		*Percent*	
*Education**	*Canadian*	*U.S.*	*Canadian*	*U.S.*
Professional/University	29	45	33	61
High school or vocational	31	6	36	8
On the job	27	23	31	31
No answer	8	2	—	—
	95	76	100	100

$\chi^2 = 22.43$; df $= 3$; $\alpha < .001$

* Multiple responses classified according to highest level reported.

percent in Canada. Nineteen percent of the U.S. responses used the bank compared to 32 percent in Canada. When asked if their reports contained a statement of changes in financial position, 84 percent of the U.S. answers said yes, compared to 66 percent in Canada.

Respondents were asked to rate directly the usefulness of the funds statement. Sixty-five percent found it very or quite useful while only

Exhibit 3. Usefulness of Funds Statement

Is funds statement used?	*Number* Canadian	*Number* U.S.	*Percent* Canadian	*Percent* U.S.
Yes	58	50	73	82
No	21	11	27	18
No response	16	15	—	—
	95	76	100	100
$\chi^2 = 1.659$; df = 2; $\alpha > .50$				

Frequency of statements	*Number* Canadian	*Number* U.S.	*Percent* Canadian	*Percent* U.S.
Biweekly	3	1	3	1
Monthly	32	49	34	65
Quarterly	5	12	5	16
Semiannually	4	1	4	1
Annually	51	13	54	17
	95	76	100	100
$\chi^2 = 30.073$*; df = 4; $\alpha < .001$				

Type of statements prepared	*Number* Canadian	*Number* U.S.	*Percent* Canadian	*Percent* U.S.
Income, balance sheet, returned earnings, funds	62	61	66	84
Income, balance sheet, returned earnings	19	12	20	16
Single statements	13	—	14	0
No response	1	3	—	—
	95	76	100	100
$\chi^2 = 13.646$*; df = 3; $\alpha < .005$				

Opinion of usefulness of funds statement	*Number* Canadian	*Number* U.S.	*Percent* Canadian	*Percent* U.S.
Very	25	20	32	30
Quite	25	9	33	14
Slightly	22	34	29	52
Not	5	3	6	4
No response	18	10	—	—
	95	76	100	100
$\chi^2 = 11.473$; df = 4; $\alpha < .01$				

Exhibit 3 (cont.)

Changes suggested in funds statement	*Number* Canadian	U.S.	*Percent* Canadian	U.S.
Satisfactory	61	45	89	80
Definition of funds	3	6	4	11
Detail	4	4	6	7
Price level	1	1	1	2
No response	26	20	—	—
	95	76	100	100

$\chi^2 = 2.11$*; df = 4; $\alpha > .50$

Reported methods for reviewing liquidity	*Number*† Canadian	U.S.	*Percent* Canadian	U.S.
Records	58	52	34	60
Bank	55	16	32	19
Budget	23	10	13	12
Consultant	31	5	18	6
Other	5	3	3	3
Nonresponse	10	20	—	—
	182	106	100	100

$\chi^2 = 31.629$; df = 5; $\alpha < .001$

Definition of working capital most useful	*Number* Canadian	U.S.	*Percent* Canadian	U.S.
Cash	28	9	30	12
Cash + some other current asset except inventory, current liability	32	15	34	20
Current assets − current liability	26	47	28	63
Multiple response	8	4	8	5
No response	1	1	—	—
	95	76	100	100

$\chi^2 = 21.434$*; df = 4; $\alpha < .001$

* Expected cell frequency below 5.
† Multiple responses included.

6 percent of the Canadian sample said the statement was not useful. The U.S. answers were less enthusiastic with only 44 percent reporting very or quite useful. The negative U.S. answers were only 4 percent. When asked to suggest changes in the statement, 80 percent of the U.S. and 89 percent of the Canadian responses stated the statement was satisfactory. A change in the definition of funds and the level of detail received very little support as suggestions for change.

In general, the larger companies have developed internal reporting systems. These reports and their published statements contained the

Exhibit 4. Understandability of Funds Statement

Familiarity with concept of working capital	*Number* Canadian	U.S.	*Percent* Canadian	U.S.
Answer				
Yes	91	73	99	100
No	1	0	1	0
No response	3	3	—	—
	95	76	100	100

Similarity of enclosed statement with firm's statement	*Number* Canadian	U.S.	*Percent* Canadian	U.S.
Yes	66	37	90	97
No	7	1	10	3
No response	22	38	—	—
	95	76	100	100
$\chi^2 = 15.01$; df = 2; $\alpha < .001$				

Solvency change — $2,300 increase in working capital	*Number* Canadian	U.S.	*Percent* Canadian	U.S.
Increase	59	62	81	83
Decrease	5	7	7	9
Can't tell	9	6	12	8
No response	22	2	—	—
	95	76	100	100
$\chi^2 = 18.3$; df = 3; $\alpha < .001$				

Dividend interpretation and reduction of LTD	*Number** Canadian	U.S.	*Percent* Canadian	U.S.
Statement amount equals cash	36.5	46	55	64
Statement amount does not equal cash	5.0	3.5	7	5
Not necessarily equal	25.0	22.5	38	31
No response	28.5	4.0	—	—
	95	76	100	100
$\chi^2 = 18.07$†; df = 3; $\alpha < .001$				

Funds from operations	*Number* Canadian	U.S.	*Percent* Canadian	U.S.
Yes — "Funds" equals cash	39	24	31	33
No	22	35	60	48
Don't know	8	14	9	19
No response	26	3	—	—
	95	76	100	100
$\chi^2 = 24.61$; df = 3; $\alpha < .001$				

* Responses to two questions averaged.
† Expected cell size below 5.

funds statement. The respondents perceived this statement as useful and would not suggest changes in its format. Speculation could provide a variety of explanations, such as "these users are not aware of the options available in formulating the funds statement." Smaller firms used outside sources to monitor their liquidity in contrast to the internal reporting systems of larger firms.

Understanding

Exhibit 4 presents the results of questions designed to assess understanding of the funds statement. These questions were based on a sample statement presented as part of the questionnaire. Nearly all respondents stated they were familiar with the concept of working capital. A very large percent of respondents (90 percent of the Canadian and 97 percent of the U.S.) stated the enclosed statement was similar to their firm's statement.

When asked if a $2,300 increase in working capital increased solvency, 81 percent and 83 percent of the respondents said yes. While the question is biased toward this answer, it still represents a large immediate reaction when three other options, including a nonresponse one, are available. Twenty-two of ninety-five Canadian respondents did select the nonresponse option. This suggests either a lack of confidence by the Canadian respondents or a very perceptive answer. Given that the correct answer is "Can't tell," an apparent bias was created for the increase or no response answers. It is interesting to note that 7 and 9 percent of respondents stated that a working capital increase was a decrease in solvency.

Two subsequent questions investigated an application of working capital for dividends and to reduce long-term debt. Fifty-five percent of the Canadian and 64 percent of the U.S. respondents equated the statement amount to cash. Only 31 percent of the U.S. respondents provided the correct answer. Again, the Canadian group had 28 of 95 questionnaires with no responses.

A fourth question asked whether funds from operations equals cash. About one-third of both groups said yes. Either negative answer would have been acceptable. While the percentage correct has improved for this question, a significant lack of understanding of the nature of working capital is demonstrated. The Canadian respondents again had a large group of no responses to the questions.

Breakdowns of the responses into small and large companies and professional or nonprofessional backgrounds did not significantly alter these results. Slight improvements in answers were evident, but sample sizes were small.

CONCLUSIONS

The results of this study provide a challenge to the accounting profession. Internal managers of smaller companies receive the statement of changes in financial position. The working capital definition of funds used in this statement is a concept which these persons feel they are familiar with or understand. As a result of this study, the authors determined that they understand the concept in its general sense, namely as cash resources for the working of their business. The accounting definition of the term is very specific and includes assets and debts which vary in their proximity to cash. Unless the user understands this point, the working capital funds statement can be misleading. Significant lack of technical familiarity is evident from the data gathered from the Canadian and U.S. respondents. Their initial reaction to questions involving the distinction of cash and working capital is to equate the two concepts. Given the relative ease of conversion, it is difficult to understand the necessity of perpetuating this confession. Perhaps other users prefer working capital, but if they have technical training, they could easily convert the statements. The user group in this study apparently did not understand that other options are available. Therefore, it behooves the accountant to inform these users directly by providing them with a statement which avoids the possibility of confusion of generally familiar concepts with technical accounting definitions. Statements provide a formidable barrier for a nontechnical user. To reduce obvious confusion is a significant advancement toward reducing this barrier.

Empirical support is found for the view expressed in the accounting literature that the funds statement needs improvement. This study provides evidence that users may be misinterpreting the funds statement as a statement of cash receipts and disbursements. To reduce confusion, perhaps as Heath suggests, three separate statements should be presented. This approach may reduce the confusion that is evident.

International Management Accounting: Its Scope and Standards

ADOLPH J. H. ENTHOVEN*

INTRODUCTION

The belief that an accounting information measurement system must be "in tune" with its socioeconomic environment is fairly well accepted these days. Accordingly, we may well ask if *our* management accounting concepts and methodology have adequately kept pace with changing international economic circumstances. Although the object of this paper is "international management accounting," it is recognized that this sphere of operations cannot be clearly segregated from the body of knowledge called "management accounting" or even from the overall information measurement system called "accounting."

Furthermore, because of the rise and spread of international and multinational enterprises, domestic and international operations have become increasingly congruent. This applies not only to transactions within the Western world, but also to interactions between First and Third World economies. Various international bodies, such as the United Nations (UN), Organization for Economic Cooperation and Development (OECD), International Accounting Standards Committee (IASC), and International Federation of Accountants (IFAC), are attempting to standardize accounting measurement, disclosure and

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reporting standards, and related professional aspects. However, such efforts essentially cover financial accounting and auditing; the framework of management accounting has not yet received the attention it needs to serve international transactions effectively.

This paper addresses some issues involved in unifying international management accounting so that it can effectively serve international operational structures and flows. Our attention will be primarily on enterprise accounting, although both government and macroaccounting are heavily influenced by better international cost-benefit standards and methods.

This outline has no claim to be either a cohesive philosophy or a "cookbook" for international management accounting; the material is too complex for that. However, it does delineate a series of elements which need attention in designing an international management accounting *conceptual framework.* (This subject is studied in more detail elsewhere.) We then question whether management accounting concepts, practices, and teaching have kept up with the changing socioeconomic requirements. This question was also raised by Gordon Shillinglaw at the Management Accounting Symposium 1980 at the University of Illinois. There he stated that:

> Most of the subject matter of managerial accounting in MBA programs today was being taught twenty years ago. Professional continuing education programs [in management accounting] also seem to remain relatively unchanged. . . . I have identified three phases managerial accounting has gone through. Phase 1 witnessed an exploration of factory costs. . . . Phase 2 was the era of management control. . . . Phase 3 is the newest phase, in which management's concern with the outside climate seems likely to call for a new accounting response."[1]

This last phase is similar to Norton Bedford's third stage of accounting development: the societal responsibility or accountability phase.[2]

As for historical trends in accounting, accounting has adapted itself fairly well to changing economic circumstances, although accounting has not really influenced the economic scene to a noticeable extent. The methods of accounting, in society, have changed due to economic conditions, social and political forces and requirements, statutory and governmental regulations, and the expansion of business to include international enterprises. The original emphasis in both the domestic

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[1] Gordon Shillinglaw, "Old Horizons and New Frontiers: The Future of Managerial Accounting," *Management Accounting 1980* (Urbana, Ill.: University of Illinois Department of Accountancy, 1980), pp. 4-5.

[2] Norton M. Bedford, *The Role of Accounting in Economic Development* (Washington, D.C.: Society for International Development, 1976), p. 72.

and international area was accounting for stewardship, followed by a micro decision-making focus. Currently, the emphasis seems to be more on relevancy and utility, with stress on socioeconomic demands, future-oriented information, and indirect costs-benefits.

In the United States, the Trueblood Report[3] set the official stage for a broader emphasis in accounting. It states that "an objective of financial statements is to report on these activities of the enterprise affecting society which can be determined and described or measured and which are important to the role of the enterprise in its social environment." Subsequently, the Financial Accounting Standards Board (FASB) in its *Conceptual Statement* added that "the function of financial reporting is to provide information that is useful to those who make economic decisions about business enterprises and about investments in or loans to business enterprises." In regard to international operations, a "cry" has also been raised to make financial statements more comprehensive and to have them disclose elements such as transfer pricing and worldwide sales, and so forth. The efforts of the IASC and UN are largely in this direction. So far, the attempts to improve disclosure and reporting have not affected international cost and management accounting, although the requirements for management accounting must reflect an even greater economic relevancy. Such requirements have a bearing on concepts and standards.

In the context of our appraisal, we may well wonder too whether an accounting conceptual framework could not serve both financial and managerial accounting effectively. The current approach seems to guide the framework to financial accounting purposes, neglecting the decision (managerial) elements.

THE CHANGING INTERNATIONAL ECONOMIC AND ACCOUNTING FOCUS

The aforementioned views of Shillinglaw and Bedford, and the changing function of accounting in general, reflect the changing international socioeconomic scene. But what international changes affect accounting? Four of the main aspects can be discussed here.

The Rise and Spread of the Multinational Enterprise (MNE) and Related Activities

Accounting for multinational enterprises has become a special area of concern for both developing and developed nations. Such agencies as the UN and OECD have drafted guidelines pertaining to MNEs. The issues which have received specific attention are transfer pricing

[3] American Institute of Certified Public Accountants Study Group, *Objectives of Financial Statements* (New York: AICPA, 1973).

(intragroup) policies; accounting policies, for example, consolidation; and value-added statements.

The UN's Commission on Transnational Corporations, for example, also includes guidelines for the disclosure of financial data and non-financial information, such as environmental impact statements, employment data, and other social information. The UN now seems to be moving in the direction of establishing a permanent accounting standards body, with a focus on providing direction to transnational corporations in regard to international standards of disclosure. This is considered to be of particular importance to many Third World countries.

The UN opines that financial reporting standards and accounting standards cannot be clearly separated[4]; however, the UN's standards do not intend to supplant national and regional efforts. Furthermore, they may go along with several of the pronouncements of the IASC, but their concern is that many developing countries do not belong to the IASC, have no voting power, and do not participate in its work. (IASC is composed of existing professional accountants' groups.)

The IASC is focusing on more uniform international accounting standards; however, the matter of requiring value-added statements and elements of transfer pricing may be left to the international agencies. Unfortunately, accounting has been paying scant attention to value-added data. Value-added data are needed for micro- and macroeconomic analysis and policy, and for efficiency measurements. For Third World countries, such reflections are particularly significant, as the value-added concept focuses more upon the wealth created by labor and capital. (The U.K.'s Accounting Standards Committee in *The Corporate Report*[5] has suggested reflecting value-added statements in companies' annual reports.)

The Involvement of the Public (Governmental) Sector in All Accounting Operations

Here two trends are encountered: the closer supervision, regulation, and control by governments of financial measurement and disclosure, and the expansion of public-sector activities. As for the former, effective allocation of financial, material, and human resources in an economy is, for most countries, of vital concern. Sound feasibility studies of a private and social cost-benefit nature are required to satisfy a

[4] United Nations, *International Standards of Accounting and Reporting for Transnational Corporations,* No. ST/CTC15 (New York: United Nations, Centre on Transnational Corporations, 1977).

[5] Accounting Standards Steering Committee, *The Corporate Report* (London: Institute of Chartered Accountants in England and Wales, 1975).

government whose projects or programs are in accordance with its economic development plan and any policies related to it.

Similar direct entity and social measurements of a cost-benefit nature are also needed to examine public-sector enterprises (parastatals) and activities. The indirect economic significance of such projects is vital in view of the absence, in many cases, of market data for outputs, such as public utility projects. In some countries (India, for example), the government conducts efficiency audits to determine that vital industries are working efficiently and effectively.

Social Responsibility Reporting

Closely related to the increase in governmental involvement and the spread of the multinational enterprise has been the increased interest — both domestically and internationally — in the social welfare functions of enterprises. Studies of this type require identification, measurement, and reporting norms which have not been adequately portrayed in our previous management accounting frame of reference. In certain countries (France, Germany, the Netherlands, and Sweden), social accounting has advanced quite rapidly[6] and has a multinational character.

Regionalization and Internationalization

Nations have moved closer together regionally and internationally for economic, social, and even political purposes. Regional examples of this trend include the European Economic Community (EEC), and the Association of Southeast Asian Nations. Regional *accounting* coordination has followed closely in these and other areas. We now have, for example, the European Union Européenne des Experts Comptables Economiques et Financiers, the Confederation of Asian and Pacific Accountants, the ASEAN Federation of Accountants, the Inter-American Accounting Association, the Middle Eastern Accounting Association, and the African Accounting Council. Such regional and international activities require better eco-financial data collection, measurement, processing, and reporting. An important element in all this is the efficacy of operational (cost) accounting data to serve the necessary project and program studies. Better regional and international management accounting concepts and standards are therefore badly needed.

TOWARD A FRAMEWORK OF INTERNATIONAL MANAGEMENT ACCOUNTING

The delineation or standardization of *rules* by a few selected countries with the expectation that they be adopted by all other countries would

[6] Hanns-Martin Schoenfeld, editor, *The Status of Social Reporting in Selected Countries,* Occasional Paper 1 (Urbana, Ill.: University of Illinois Center for International Education and Research in Accounting, 1978).

not be in the best long-term interest of management accounting. Socioeconomic environments and requirements differ by country and region, and the need for reflecting direct and indirect (social) cost-benefit elements, value-added measurements, and other macro- and microeconomic activities also tend to be distinct. It may be more useful if, first of all, an attempt would be made to outline a *basic framework,* or theory, of international management accounting. Such a framework is to be explored on an international basis, setting basic concepts and standards for management accounting. Flexibility should exist in setting forth the standards whereby primary and secondary norms may have to be outlined for adoption under different economic circumstances.

What would be the composition of such a "theory"? First, broader or extended measurements of a cost-benefit nature may be warranted, as reflected in the previous section. They should be based upon changing socioeconomic demands. Both private and social cost benefits will be needed.

Secondly, the integration of the accounting information system with the economic planning, policy, and decision-making system may have to be tighter. This involves an interaction between these spheres of operation, requiring the management accountant to be cognizant of economic analyses, planning, and policy instruments such as national accounting, input-output analyses of a static and dynamic nature, equilibrium (shadow) pricing, and capital-output criteria. These aspects *underlie the theory,* without constituting the theory itself. We might first of all clarify what is meant by the words *international management accounting theory.*

International (accounting) can be described as the application of accounting concepts, norms, and practices to the international or transnational environment. It deals with the respective flows and stocks of entities in one nation or region versus those in another. International accounting is not to be considered a separate system (as enterprise, macro, or government accounting) but is essentially the adaptation of accounting to the sphere of international operations.

Management accounting as defined by the American Accounting Association (AAA) in its 1966 "A Statement of Basic Accounting Theory" still seems generally applicable, if interpreted in a broader economic sense. The definition states:

> Management Accounting is the application of appropriate techniques and concepts in processing the historical and projected economic data of an entity to assist management in establishing plans for reasonable economic

objectives and in the making of rational decisions with a view toward achieving these objectives.[7]

This notion is somewhat constrained in that it fails to elaborate on (1) *economic data,* which today can include socioeconomic data, and which takes into account not only private but also public requirements. The data also reflect social cost-benefit criteria, as well as private cost-benefit measurements. Many of the externalities must be made indigenous to the management accounting frame of reference and techniques. (2) The fact that between historical and projected economic data, we have the *current costs or values;* it is these current or replacement values (value is an economic concept) which the accountant should also measure. (3) *Reasonable economic objectives,* which also may need to become broader as was discussed under point (1).

Absent from this definition is the need for assistance in economic analyses and policies, which are somewhat distinct from decision making — although we can argue that they lead to the making of decisions.

The Management Accounting Practices Committee of the National Association of Accountants gave the following — somewhat different — definition in 1980.

Management accounting is the process of identification, measurement, accumulation, analysis, preparation, interpretation, and communication of financial information used by management to plan, evaluate, and control within an organization and to assure appropriate use of and accountability for its resources. Management accounting also comprises the preparation of financial reports for nonmanagement groups such as shareholders, regulatory agencies, and tax authorities.[8]

This definition, in the author's opinion, seems somewhat narrower than that of the AAA, although it can be interpreted in the same vein.

A theory, according to Webster, is a "coherent set of hypothetical, conceptual, and pragmatic principles for a field of inquiry." Whether accounting — and for that matter, management accounting — can be classified as a separate and independent theory or a subtheory in economic science falls somewhat outside the scope of this paper. However, some doubt exists whether we really have been able, as yet, to design a cohesive accounting theory or whether, as Professor Ray Chambers once mentioned, "We have a whole series of theories." This may be particularly applicable to the international context, where we encounter many notions which assumed the name of "theory." It is questionable

[7] American Accounting Association, *Statement of Basic Accounting Theory* (Sarasota, Fla.: AAA, 1966), p. 39.

[8] National Association of Accountants, *Definition of Management Accounting,* Statements on Management Accounting, Statement 1A (New York: NAA, 1981).

whether we have yet developed a rational and universally applicable accounting theory.

THEORY BUILDING IN MANAGEMENT ACCOUNTING

Management accounting, too, has suffered the same fate of not having a "theory," notwithstanding that many techniques and methods have found universal acceptance. If this acceptability has occurred, why bother with a theory? The analogy may be made with the medical profession — and its history. A number of cures, such as herbs, may be very beneficial to a patient, but it is reasoning and science that ultimately have given medicine its true base. Possibly, accounting now finds itself in the same situation. We have, hopefully, entered the era of the scientific accounting base; the work of FASB in the United States (and its *Conceptual Framework*) is a good example. However, it has essentially been an *inductive* approach, and the *deductive* method has, to a large degree, been absent in this thinking model. It is interesting to observe that the deductive approach has constituted the basis of accounting theory in the Netherlands since the 1930s. The high level of Dutch accounting practice may have been extensively influenced by the theoretical foundation.

A science can only flourish if there is a proper dialogue between the inductive and deductive approaches. In this regard, our accounting theory (or science) still shows its gaps, although we must recognize that accounting "theory" takes into account the political process. The normative aspects may have to submit to practicality under current circumstances. However, this should not prevent us from trying to cast such a conceptual framework.

A well-developed conceptual framework should have as its foundation:

1. *Aims or objectives,* which, in our times, need to be related to the socioeconomic aims of society and its plans and policies. These should not prevent accounting from remaining "neutral." The objectives are the basic parameters for the conceptual framework.
2. *Concepts* constituting the pillars of the framework; these concepts serve as the basis for evaluating existing standards and developing new ones.
3. *Standards* (norms) or principles setting forth the guidelines linking the conceptual and practical elements.
4. *Rules, techniques, and procedures* which set the specific operational directives.

The development of management accounting has mainly been based on items 3 and 4, while the objectives and concepts have been weak

and are largely derived from what was acceptable in financial accounting.

The task before us, then, is to try to design a management accounting conceptual framework, and determine what characteristics are warranted for *international management accounting*. Such a conceptual framework enables a fairer assessment of the economic reality, relevance, and usefulness of the standards to be cast.

It is fair to say that management accounting, more so than financial accounting, faces the challenge of being economically relevant. The context in which management accounting must function tends to be broader; it deals with the effective and efficient allocation of financial, indirect, and human resources. Such allocations — based on sound and relevant measurements — require direct and indirect assessments as part of the objectives. It also uses nonaccounting information to reach the objectives, which tend to be of an economic and social nature. Based on those elements, it sets forth normative models which serve this frame of reference.

Probably what is most deficient in international management accounting is a clear understanding of the (1) objectives and (2) concepts, which are pertaining to the microentity's *inductive* approach but also on the *deductive* approach reflecting socioeconomic conditions and objectives. This requires a fairly profound insight into economics and sociology, in addition to good quantitative and computer-oriented schooling.

We focus now on the changing objectives we have encountered in the area of international management accounting, which do show a close affinity to the changing international economic scene commented on in this paper in the section concerning the changing international economic and accounting focus. The principal changes in our opinion are these.

1. Many governments, domestic and foreign, have taken a greater interest in what *enterprises contribute to the socioeconomic welfare*, or well-being, of the economy and its citizens. The contributory elements have become a major aspect in such assessments, and the social cost-benefit (or economic return) aspects have become a major underlying goal. The objective of management also has changed from pure maximization of income to growth and continuity. Therefore, its image elements, such as social goodwill and acceptance, have become important features. The role of the public sector in controlling — and even guiding — micro-operations has become a major feature. The foreseeable scarcity of many resources may well enhance such a trend.

2. The requirements of *social responsibility* are closely related to this. Alienation of the public by means of management practices is being prevented at all cost. The current era of social responsibility[9] requires that the public know "what is going on." Closely related to this is the reflection of social indicators and the need for corporate socioeconomic audits.
3. The *growth of the large multinational enterprise* has forced changes in international accounting demands. Domestic and foreign parties (for example, governments) require a clear insight into the objectives of these entities and their contributions to the economy. This has forced upon us a whole series of different measurement demands: value-added, transfer pricing, and employment and social welfare contributions, for example.
4. The *interdisciplinary involvement of management accounting* with behavioral science, organization theory, economic science, sociology, quantitative methods, and economic science must be reflected in our management accounting system. The interdisciplinary involvement may also be considered a resultant factor.
5. The concept of *what is meant by costs and benefits,* in contrast to expenditures and revenues, needs to be expanded to fit eco-accounting analysis, policy, and decision models. Cost-benefit notions cover a broad range of measurements, based on resources and activities, which tend to go beyond the direct aspects of an entity. Society now demands an insight into the application and benefit of resources used; this requires an enlargement of the accounting frame of reference. For example, the determination of profit or income in the micro sense may well cause capital consumption or depletion in a macro sense, as market forces are not a good basis for social cost-benefit analysis. All these criteria pertain to a rather broad underlying framework, the conceptual foundation and its quantitative characteristics, which set the bases for the development and use of techniques and norms.

Thus far we have merely explored the elements that are to enter into the development of a theory of international management accounting. These inputs are, in the author's opinion, an integral part of reflecting a cohesive framework of international management accounting.

It appears that the theoretical developments now taking place tend to be of a technical, vertical, and inductive nature rather than being deductive, conceptual, and horizontal. For example, the approach toward current values (or costs) has been a case of some deductive

[9] Ibid., pp. 71-77.

reasoning, although in most countries it has become an adjunct to inflation accounting, which is rather unfortunate. The reflection of current values in management accounting is to be based on the notion of measuring and reporting relevant (economic) costs.

While management accounting is considered a subsystem of the accounting information system, like financial accounting, it has adopted, in this author's opinion, a wider economic base. Gordon Shillinglaw refers to the newest phase as one "in which management's concern with the outside climate seems likely to call for a new accounting response."[10] This outside climate is, in our opinion, a complete distinct set of changing underlying parameters covering the socioeconomic objectives, plans, and policies of a nation, or group of nations, in organizations such as the UN, OECD, and the World Bank. The development of a theory of management accounting should first cover a delineation of objectives and relationships with other disciplines. Such a "thinking framework" or philosophy must underlie a conceptual framework and its norms. Whether such a theory of management accounting would constitute a *unifying theory* is still questionable, as the objectives vary to some extent by country and region, but at least a set of common terms of reference, which constitute a unifying base, can be outlined.

Richard Mattessich has given extensive thought to "theory" building over the years, and in regard to management accounting theory, he sees a certain fragmentation and even possible disintegration unless some counteracting forces can be mustered to bring coherence to the discipline. Mattessich makes it clear[11] that management accounting needs a great deal more methodological explanation before we can expect to explain scientifically why we do what we do, and that management accounting must explore the layers of the hierarchy of systems in which it finds itself embedded. Management accounting may, in Mattessich's opinion, adopt an integrated approach instead of a dead-end piecemeal approach. His observations make good sense.

According to Mattessich, a useful management accounting theory requires the linkage of "economic theory" with the purpose-oriented details of current academic management accounting theory. This linkage would involve the formation and testing of specific purpose-oriented hypotheses about such things as realization, allocation, and classification. The linkage of the object theory with the meta-theory would be one of the unifying aspects for management accounting. Merely sub-

[10] Shillinglaw, "Future of Managerial Accounting," p. 5.
[11] Richard V. Mattessich, *Instrumental Reasoning and Systems Methodology* (Boston: Reidel, 1978).

stituting meta-models for object models would not be effective; it is the complementary aspect that is of crucial importance. (The meta-theory deals with the normative as well as positive aspects of the environment in which those object models are embedded.) Mattessich considers that such a meta-theory regards neither the goals nor all the constraints as indigenous variables, but examines interrelations of invironmental influences upon changing goals. It brings in the aspects of multi-dimensionality based on a comprehensive outlook.[12]

In regard to a general theory of management accounting, Mattessich states:

> First of all, a general theory of management accounting would itself constitute a fragment of a more comprehensive theory. To benefit from the economic advantages of the scientific approach and to avoid unnecessary fragmentation, we should attempt to derive our theory of management accounting by means of interpretations of a truly general theory of accounting comprising all micro- and macro-areas of our discipline. The individual object models would then be attained by further and more specific interpretations. But in order to choose the correct interpretations, we are in need of the previously mentioned meta-models of our discipline. I thus envisage this subdiscipline of management accounting as an intersection and interaction of two comprehensive frameworks, one that provides the basic assumptions and theorems of the input-output model characteristics for *all* accounting systems, and the other supplying the more or less *specific interpretations* to those basic assumptions on the basis of shifting social norms and other environmental constraints. This kind of integration seems to me the first precondition for preventing further fragmentation .... A second condition lies in the awareness of the advantages of a more unified system of management accounting.[13]

A basic issue remains to be addressed, that is, how distinct would an *international management accounting theory* be from what has been sketched? The basic features would be similar, but the international demands give it an extra-dimensional nature. The following may illustrate the author's contention, based upon previously sketched changing forces:

1. Due to tighter governmental planning and control mechanisms, the need for national and micro cost-benefit measurements may be more profound. Furthermore, several countries require extensive cost or operational audits to determine the efficiency of both domestic and international activities in their country. The interaction between micro- and macroeconomic and accounting spheres tends to be closer

[12] Ibid.

[13] Richard V. Mattessich, "Management Accounting: Past, Present, and Future," *Management Accounting 1980* (Urbana, Ill.: University of Illinois Department of Accountancy, 1980), p. 232.

due to national requirements. This will have an impact on the basic concepts.

2. Measurement of externalities, including indirect and secondary costs and benefits, will have to be more a part of the scope of the international theory than it was in the domestic one. In turn, prospective measurements must be incorporated as part of a nation's economic planning and programming structure. Sound economic planning should be based on carefully evaluated feasibility studies, incorporating input-output analyses, capital-output rations, and shadow pricing.

3. The multinational enterprise operations will have a strong demand for value-added statements and data, for social indicators, and for uniform classification and valuation criteria based on certain internationally to-be-accepted norms.

The conceptual foundations underlying such an international management accounting theory, although of the same interdisciplinary nature as regular management accounting theory, differ due to the somewhat distinct objectives.

INTERNATIONAL MANAGEMENT ACCOUNTING STANDARDS

Cohesive management (cost) accounting standards should be developed geared to the frame of reference outlined here. International standards are necessary for international, regional, and domestic evaluations and feasibility studies, cost-price comparisons, performance appraisals, and so on. Standards facilitate the measurement of international enterprise and industry efficiency and performance. They pinpoint international capital needs; conduct project and program appraisals on an international scale more reliably; facilitate investment decisions; relevantly set forth comparative national (macro) accounts; and evaluate and act upon effective industry, sector, and national economic plans. The need for international — and national — cost accounting standards is not limited to private enterprise operations and comparisons, but includes public-sector financial management. Standards also need flexibility to serve the specific micro- and macro-socioeconomic circumstances and requirements of countries and regions. Some specific items subject to greater standardization would be depreciation and its valuation methodology, inventory valuation and measurement of the elements to be incorporated, research and development, and the imputation of cost of capital employed as a cost component.

The extent to which certain accounting aspects (such as value-added, current values, and transfer pricing) are influencing management accounting standards is sketched here briefly.

1. Value-added information gives a clear portrayal of the contributions which an enterprise makes to the economy; it deals with wages and salaries, interest, profit, depreciation, and tax. Value-added is also used for measuring managerial efficiency, assessing the use of factors of production, and evaluating the social performance of an entity.
2. Current value (cost) information is necessary for effective cost-benefit appraisals, cost calculations, resource allocations, performance assessments, and managerial planning and decision making. It can link the micro- and macroaccounting sphere, it serves the capital maintenance concept, and it spurs internal and external capital formation. Current costs portray more clearly the economic activities conducted and the results of operations.
3. Transfer pricing pertains to the establishment of prices of goods and services between home office operations and their facilities abroad. It can be based on cost or market.

In connection with these aspects, *standards* of an international nature are to be established. Efforts in this direction have been made by the UN and the IASC; however, these pursuits have not yet born sizable fruits, nor are they properly linked with an underlying conceptual accounting framework. Furthermore, they do not appear to be geared to international management accounting, as their focus is on financial accounting.

International standard setting is of great worldwide significance, but such standards may need to be of a variety of magnitudes. The following might be a suitable scenario.

1. The development of certain *primary standards* for international operations, considering different economic objectives and circumstances.
2. The development of a set of *secondary standards* pending upon regional or national circumstances. For example, standards pertaining to value-added measurement and reporting and the portrayal of indirect costs and benefits play a vital role in many economies. In essence, then, the secondary standards could be developed in greater coordination with economic regions.

The IASC, UN, et al. could well recommend such standards, but the standards also need to be linked with a conceptual framework, serving the various subsystems (or branches) of accounting, and must have true international validity. They require a stage, or phase, approach involving primary, secondary, and possibly more, operational standards.

In conjunction with the development of management accounting standards, auditing standards should be re-evaluated to meet the

operational requirements. Management auditing standards have not been well developed yet.

THE EDUCATIONAL AND RESEARCH IMPLICATIONS FOR INTERNATIONAL MANAGEMENT ACCOUNTING

The evaluation and development of a separate body of knowledge for international management accounting also require an extensive educational and research concentration. It can be along the following lines:

1. The exploration and layout of an (international) management accounting *conceptual framework* require urgent attention by academicians. They can play an extremely important role in the design of the framework. The framework should be of a broad interdisciplinary nature, linking it with economic science, behavior, quantitative methods, organization theory and, for international purposes, economic development planning and policy. This framework is to be based on society's changing objectives or aims. The objectives underlying the framework may well diverge — by country — as to primary and secondary objectives. (Government accountants in the United States are working on their own conceptual framework.)
2. *Concepts and standards* are to be an integral part of such a theory, with such standards being linked as much as possible with other domestic and international standard-setting developments. The need for commonality of standards for international operations is particularly desirable. Merely translating foreign standards is not very useful, nor would it serve the discipline in the long run.

   Various structural economic developments have taken place in the last decades which require standards to be established, but which are based upon different purposes. Such developments, which need to be clearly assessed by academicians, are the rise and growth of multinational enterprises, the economic integration taking place in certain regions, the industrialization of many Third World economies, and the extension of accounting to make it useful for a variety of socioeconomic purposes. Such changing patterns and activities need to be incorporated in the procedures used to set the standards.
3. Academic courses in "international accounting," at both the undergraduate and graduate levels, should pay greater attention to the management accounting facets discussed earlier. In general, courses in international accounting largely deal with financial accounting aspects and certain control aspects of MNEs. They do not adequately cover the issues referred to in this paper.
4. Courses in management accounting also must pay attention to the

broader (international) dimensions; the content of our courses has not kept pace with the changing demands and circumstances. The courses have a good vertical approach but not a horizontal (interdisciplinary) one.

5. A prerequisite, or a part, of a course on international accounting should be a fair understanding of international, economic, and social conditions, and a study of historical developments in accounting. This would include knowledge of "zones of accounting influence," economic analysis, planning and programming requirements, and the use of data for national or macroaccounts.

SUMMARY AND CONCLUSION

This analysis — essentially in the form of observations — has attempted to cover some of the elements underlying and entering into an international management-accounting framework; they do not constitute the framework itself. However, the exogenous and endogenous variables sketched appear to be of essence for a dynamic internationally oriented management-accounting framework. In this author's opinion, the development of such a framework must consider an extensive amount of deductive and environmental reasoning. Although we may well arrive in the first instance at a conceptual framework covering the whole system of accounting, the current approach taken by the UN, FASB, and IASC actually seems to prevent such an emphasis at this stage. The efforts by these agencies are oriented to microfinancial accounting measurement, disclosure and reporting, and have paid scant attention to the vital area of management accounting. Accordingly, it might be desirable for the management accounting bodies around the world to develop their own framework and standards. However, a synthetic approach, constituting a common basic accounting theory, appears gradually very much warranted. The international academic community could play a major role in exploring the concepts and elements for such a partial and unified accounting structure serving international economic activities and resources.

Experience Requirements and the Education of Certified Public Accountants

BENZION BARLEV and ABRAHAM FRIEDMAN*

The role of the experience requirement in the education of independent public accountants has been questioned increasingly in recent years. The Committee on Education and Experience Requirements for Certified Public Accountants (the Beamer Committee), for example, recognized the importance of experience in the education of professional accountants but did not consider a formal experience requirement as necessary for certification as it did another year of formal education. The Beamer Committee therefore recommended the substitution of a fifth year of university study instead of the experience requirement. Newly established professional accounting specializations, on the other hand, have continued to demand a requisite period of experience prior to certification.[1] For example, the management accounting program in the United States requires two years of experience, the certified internal auditor program three years, and the chartered bank auditor program three to six years of experience, depending upon the candidate's educational background.

These differing approaches to the experience requirement suggest a need to re-evaluate its role in accounting education. Studies and articles dealing with this issue have presented intuitive or practical

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[1] L. H. Kistler and J. F. Guy, "An Evaluation of Professional Certification Programs in Accounting," *Journal of Accountancy* (September 1975): 104-8.

analyses of accounting education without referring to any theoretical framework.[2] Without such a framework, however, the various goals and policy alternatives of the education process cannot be analyzed or evaluated adequately. In this paper, therefore, a theoretical framework for the systematic analysis of the goals of professional accounting education and the means of achieving them are presented. The framework is then used to analyze the role of experience in accounting education.

A THEORETICAL FRAMEWORK

Analysis and evaluation of the adequacy of an educational system requires (1) determination of the body of knowledge that must be transmitted to the student; (2) analysis of the attributes of various methods of education; (3) matching of the specific type of knowledge required with the appropriate method of education; and (4) comparison of the existing educational system with the most appropriate system indicated in (3). The following discussion refers to these four processes in creating a theoretical framework for the analysis of professional education.

The Characteristics of Professional Knowledge

Professional education should provide the student with adequate tools for the analysis of situations or problems which the professional faces and that offer optimal solutions to these problems. Problems encountered by a professional may be homogeneous or heterogeneous. One lawyer, for example, may deal mainly with lease contracts that are almost identical, while his colleague may deal mainly with criminal cases that differ widely from one another. Most professionals, however, encounter situations which are neither completely homogeneous nor completely heterogeneous.

The professional knowledge needed to solve problems the professional encounters may encompass either well-defined explicit methods for seeking solutions ("cookbook" or technical solutions), or ill-defined implicit methods which are not fully understandable and therefore not fully analyzable ("artistic" solutions). In "real" life, professional knowledge constitutes a continuum, with the two components presented here marking its extreme ends.

By combining these two classifications, that of the types of problems

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[2] E. L. Summers, "Accounting Education's New Horizons," *Journal of Accountancy* (September 1974): 56-63; and W. Schwartz, "A Local Practitioner Comments on the Education of Accounting Students," *Journal of Accountancy* (November 1975): 92-94.

Exhibit 1. Types of Professional Knowledge

Methods of search for solution	*Types of Problems* *Homogeneous*	*Heterogeneous*
Analyzable	Cell No. 1 A. Similar problems B. Well-defined method for seeking solutions "Technical"	Cell No. 2 A. Variety of problems B. Well-defined method for seeking solutions "Engineering"
Unanalyzable	Cell No. 3 A. Similar problems B. No explicit or analyzable method of search for solutions "Crafts"	Cell No. 4 A. Variety of problems B. No explicit or analyzable method for search for solutions "Artistic"

the professional faces and that of the methods for seeking solutions, we are able to suggest a division of professional knowledge into four extreme types. This is presented in exhibit 1.

Cell number 1 of exhibit 1 describes a cluster of similar problems having well-defined methods for seeking solutions. The professional must only identify the problem, which is an easy task with the experience of many similar problems. He or she then should fit a well-defined method for seeking solutions to such a problem. An optimal solution will be right at hand. The knowledge required for handling such problems is thus very "technical."

Cell number 4 describes the other extreme: a cluster of heterogeneous problems for which there is no explicit and analyzable method for reaching solutions. Here the professional faces two difficult tasks: analyzing the problem and searching for an adequate solution. Since the problem is a unique one and since no explicit method for search for a solution is available, the process of handling such a case requires intuition and imagination. The professional knowledge required for handling such cases may be termed "artistic."

Between these extreme cases are two other cells. Cell number 2 describes a case in which the professional faces a variety of problems which have well-defined methods for seeking solutions. The major problem the professional faces in this case is the identification of the problem. Once this is done, the solution is readily available. The knowledge required for such a case may thus be termed "engineering." Cell number 3 identifies a case in which the professional faces (or specializes in) similar problems for which there is no explicit and

analyzable method of search for solutions. The handling of such problems requires a "crafts" ability. Once a solution is reached, it may be applied to many problems.

These four cells describe only four points, two extreme and two turning points, on a continuum of situations which may vary according to the similarity of the problems, and according to the availability of well-defined and analyzable methods of search for solutions.

The Characteristics of Educational Systems

Educational systems may be classified by the use of two variables:

The structure — the degree of formality or rigidity of the program

A formal or rigid system includes educational programs similar to those offered by schools, colleges, and other institutions.

An informal or nonrigid system includes educational programs such as on-the-job training, apprenticeship programs, experience requirements, and so forth.

The content — the degree of theoretical knowledge versus practical technical knowledge. Educational systems that transmit theoretical knowledge teach the principles and basic rules that govern the scientific domain. On the other hand, educational systems that transmit technical knowledge stress practical methods and formal techniques with which the professional can handle practical problems.

Formal and informal education systems differ from each other in the following ways:

1. The formal system of education uses educators who are trained specifically for the task of teaching, whereas the informal system uses qualified practitioners who usually do not have any training in education.
2. The formal system encourages the creation of educational aids, such as textbooks, casebooks, and so on, and uses them extensively. The informal system is based on learning by imitation of the "master's" behavior and by the use of verbal instructions.
3. The formal system is based on the development of common and objective examinations which do not depend on the specific instructor, and which permit the creation of a general ranking system. The informal system is based on the subjective evaluation by the student's "master," and only in rare cases are formal and widely accepted examinations used. The ranking of an apprentice thus depends on the goodwill and reputation of his "master."
4. The formal system of education utilizes a common body of knowledge and of educational methods and, therefore, allows the mobility

of both students and teachers from one institution to another. By contrast, the informal system, which does not have a common body of knowledge, does not encourage the mobility of either the students or the teachers.

5. The formal system of education is more efficient than the informal system in the sense that it enables the training of a larger number of students at one time than does the informal system of education.

Educational systems that transmit theoretical knowledge differ from those that transmit technical knowledge in the following ways:

1. An educational system that transmits theoretical knowledge teaches the trainee how to search for solutions but does not provide specific solutions. An educational system that transmits technical or practical knowledge provides solutions to specific problems but does not train the student to seek new solutions.

2. An educational system that transmits theoretical knowledge allows the trainee to generalize from the several specific examples that he or she has experienced to many real problems (induction) after acquiring the basic rules. On the other hand, an educational system that transmits technical and practical knowledge deals with a limited number of problems whose solutions cannot usually be generalized. Thus, the student learns to handle only a limited number of problems.

Educational systems, then, can be characterized by the two variables just analyzed: the structure and the content of the system. We can now construct an educational system space describing the four types of educational systems. This space is shown in exhibit 2.

Exhibit 2. Types of Educational Systems

Content of the educational system	*Structure of the educational system*	
	Formal education	*Informal education*
Practice (techniques)	Cell No. 1 A. Formal education B. Well-defined practice "Textbook" or "Cookbook"	Cell No. 2 A. Informal education B. Well-defined practice Exercises, case studies, and simulations
Theory (principles)	Cell No. 3 A. Formal education B. Theory and principles Textbooks for theory, simulation, limited apprenticeship	Cell No. 4 A. Informal education B. Theory and principles On-the-job training, extensive apprenticeship

Cell number 1 of exhibit 2 describes a formal educational system that transmits well-defined practice and techniques and, therefore, can be best identified as an educational system of a textbook or a "cookbook." Cell number 4, on the other hand, describes an informal educational system that transmits theory and principles and, therefore, extensively utilizes apprenticeship or on-the-job training. Between these two extremes we find two other cells. Cell number 2 describes an informal educational system that transmits well-defined practice and, therefore, utilizes exercises, case studies, and simulation. Cell number 3 describes a formal educational system that transmits theory and principles and thus utilizes methods such as textbooks for theory, simulation, and limited apprenticeship. These four cases lie on a continuum that portrays various types of educational systems. Cells 1 and 4 represent its extreme points, whereas cells 2 and 3 represent turning points which vary according to the interplay of the two major variables in the educational system, namely structure and content. The information contained in exhibits 1 and 2 indicate that, for every type of professional knowledge, there is an educational process which best matches the professional knowledge to be transmitted. The most suitable match between the two is given in exhibit 3.

Professional knowledge that deals with homogeneous problems and with a well-defined method for seeking solutions to those problems is best transmitted by an educational system that concentrates on the use of textbooks (exhibit 3, cell number 1). The type of knowledge required in this case is "technical." It is related to a limited number of groups of similar problems for which there is a specified solution-finding process. It is possible to record in detail the search method and the adequate solution for each problem. Such knowledge is thus easily transmitted by the use of textbooks.

Professional knowledge which deals with a large variety of problems

Exhibit 3. The Optimal Educational Process for Types of Educational Knowledge

Methods of search for solutions	*Types of problems* *Homogeneous*	*Heterogeneous*
Analyzable	Cell No. 1 Textbook or cookbook	Cell No. 2 Exercise, case studies, and simulation
Unanalyzable	Cell No. 3 Textbooks for theory simulation and limited apprenticeship	Cell No. 4 On-the-job training and extensive apprenticeship

having well-defined methods for seeking solutions was termed "engineering." This knowledge is best transmitted by an educational process that utilizes exercises, case studies, simulations, and, to a lesser degree, textbooks (exhibit 3, cell number 2). Here the method for seeking solutions is well defined and can be taught by the use of formal methods. The student who must acquire proficiency in fitting a specific solution to a specfic problem can learn the general rules of search from textbooks and can then practice the application of the rules to the actual problems through the use of exercises, case studies, and simulations.

Professional knowledge which deals with a small number of similar problems for which there is no explicit and analyzable method of search for solutions was termed "craft." This knowledge is best transmitted by an educational system that uses theory extensively, along with simulation and limited apprenticeship (exhibit 3, cell number 3). Such a system is best fitted for situations in which it is impossible or impractical to describe the method of search for solutions and in which the only information that can be transmitted is the theoretical base that underlies the process of search for solutions. Once the general approach has been learned, through simulations or limited apprenticeship, the student can then begin to acquire the skills of applying the solutions.

Professional knowledge which deals with a large variety of problems for which there is no explicit or analyzable method of search for solutions was termed "artistic knowledge." This knowledge can be best transmitted by the extensive use of on-the-job training and apprenticeship along with the study of relevant theories (exhibit 3, cell number 4). In such a situation, textbooks are not useful for transmitting the required knowledge because of the variety of problems involved and the lack of an explicit method of search for solution. On-the-job training and extensive apprenticeship are the best methods through which the student can acquire the practical skill of identifying and analyzing a problem and of finding the most adequate solution to it.

THE CURRENT STATUS OF THE EXPERIENCE REQUIREMENT IN ACCOUNTING EDUCATION

Requirements for the certification of public accounting (CPAs) vary from state to state. Most states require four years of college study and one or two years of experience in public accounting, in addition to passing the CPA examinations. In some states, candidates with a master's degree need no experience for certification; that is, additional study is apparently accepted as a substitute for experience.

The content of accounting education should reflect the type of

services provided by the professional accountant. New technologies, such as computers and high-quality data processing systems, economic innovations, such as the audit of local governments, and, in general, the changing environment affect the scope of work of the independent public accountant.[3] It has thus become increasingly difficult to determine precisely what an accountant does and, hence, what he or she must know.

In recent years, several attempts have been made to redefine the common body of knowledge needed by accountants and to outline an educational process for acquiring this knowledge. Most of these attempts stress the need for more intensive study for beginning accountants, while minimizing or discounting the usefulness of the traditional experience requirement.

One such study is found in *Horizons for a Profession*[4] in which the authors, Roy and MacNeill, do not suggest practical reforms in accounting education, but their conclusions imply a recommendation for five years of education (instead of four) and a master's rather than a bachelor's degree as the basis for certification.[5] It is interesting to note that these conclusions were discussed and generally accepted by leading accountants at some fifty seminars held across the United States to assess the results of the study. Roy and MacNeill state that:

> The most important and significant aspects of a CPA's services to his clients and to the public cannot be defined as knowledge, nor even experience, but must be described by more elusive terms: wisdom, perception, imagination, circumspection, judgment, integrity, . . .[6]

Their study concentrates mainly on the courses and subjects to be studied by prospective CPAs, and almost completely ignores the value of experience.

Horizons for a Profession served as the basis for the recommendation of the Beamer Committee that no qualifying experience be required of those who complete five years of acceptable college study.[7] The committee's recommendation was stated as follows:

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[3] D. Jacobson and J. M. Bundy, "Behavioral Pattern of the Independent Accountant in Response to the Changing Environment and Its Ethical and Intellectual Implications — The U.S.A.," *The Third Jerusalem Conference on Accountancy* (Institute of Certified Public Accountants in Israel, 1978), pp. 100-13.

[4] R. H. Roy and J. H. MacNeill, *Horizons for a Profession* (New York: American Institute of Certified Public Accountants, 1967).

[5] Ibid., p. 5.

[6] Ibid., p. 1.

[7] American Institute of Certified Public Accountants, Committee on Education and Experience Requirements for CPAs, *Report of the Committee on Education and Experience Requirements for CPAs* (New York: AICPA, 1969), p. 1; known as the Beamer Report.

(1) We have concluded that the common body of knowledge delineated by *Horizons for a Profession* can best be obtained through college study.

(2) We recognize a clear-cut distinction between the value of experience and the value of an experience requirement. There can be no question about the value of experience but there is serious doubt about the value of present-day experience requirements.

(3) It is unreasonable to require a period of qualifying experience for which uniform standards cannot be set and which cannot be effectively policed.

(4) Experience requirements imply apprenticeship which is inappropriate for a learned profession.

(5) The continuing dilution, reduction and elimination of experience requirements is positive evidence of their ineffectiveness and of the trend toward eventual elimination of all experience requirements.

(6) There is no evidence that CPAs obtaining their certificates in jurisdictions without experience requirements are more often guilty of infractions of the rules of professional conduct or substandard practice than those with extensive experience.

(7) A fifth year of college study is of greater benefit to the CPAs than a year or two of experience as a junior staff member of a CPA firm. While the first years of appropriate experience may enhance certain qualities such as professionalism and technical competence, a college program of at least five years permits the attainment of both breadth and depth of knowledge that is unlikely to be obtained from a four-year program and satisfying an experience requirement. While the foregoing reasons are the bases for our recommendations, there are two practical considerations which further support our position:

> (1) Most CPAs who plan to practice independently will take a position with an established CPA firm for a few years.
>
> (2) Even in the absence of an experience requirement the time needed to pass all parts of the CPA examination will provide most candidates with a period of practical experience.

A third pronouncement on educational requirements for CPAs was issued by the Board of Standards for Programs and Schools of Professional Accounting, a committee established by the American Institute of Certified Public Accountants in 1974 to determine accreditation standards for accounting education programs. The board described the goals of accounting education as follows:

Comprehension of the total system of financial information flow and its relation to other systems in generating, analyzing and communicating data useful to management, the public or governmental agencies.

Ability to present financial information in conformity with generally accepted accounting principles.

Ability to audit in accordance with generally accepted auditing standards

both for a critical evaluation of the system used in developing the financial data and for presenting fairly the information in financial statements.[8]

The board also stated that accounting education "should be broadly conceived and should provide for a *variety* of occupational alternatives within the structure of the accounting profession"[9] (emphasis added).

With regard to the practical process of education, the board, also known as the Miller Committee, supported the principle that students graduated from approved schools be awarded a CPA certificate upon passing the uniform examinations, that is, without completing an experience requirement.[10] However, the board did suggest that "the professional course sequence should provide an understanding of the 'discipline of accounting' and of the 'environment of accounting' " and should include topics such as the organization of the profession, ethics, and responsibilities. Furthermore, this committee added, courses in accounting should "consist of cases and/or problems reflecting actual business situations."[11]

The conclusions of both the Beamer Committee and the Miller Committee with respect to the experience requirement can be questioned on various grounds. For example, the Beamer Committee based its recommendation to abolish the experience requirements on the doubtful value of this requirement in its present form. The same committee stated, however, that "there can be no question about the value of experience." One wonders, therefore, why the committee did not suggest the reform of the experience requirement rather than its elimination. The Miller Committee, on the other hand, implied that the use of case studies of "actual business situations" could substitute for the experience requirement. No empirical study, however, has ever proved that the case method can substitute for experience in accounting education.

Earlier in this paper the authors developed a formal model for professional education. They return to the model at this point and evaluate the recommendations summarized with reference to the model.

AN APPLICATION OF THE THEORETICAL FRAMEWORK TO ACCOUNTING EDUCATION

Some notable accountants hold the view that

[8] American Institute of Certified Public Accountants, Board of Standards for Professional Accounting Programs and Schools, "Standards for Professional Accounting Programs and Schools," *Journal of Accountancy* (June 1976): 89.
[9] Ibid.
[10] Ibid., p. 89.
[11] Ibid., p. 91.

the purpose of professional accounting education is to train a man *to learn to become* a practicing professional, rather than to train a man *to be* a practicing professional at the end of the formal educational process.[12] (emphasis added)

However, the current authors agree with Seidman and Clare, who in their statement of dissent from the majority report of the Commission on Standards of Education and Experience for CPAs[13] said:

Ours is a "practicing" not an academic profession. The public looks upon the CPA certificate as a mark of competence in practice, not a license to learn how to practice. To the public, the CPA, young or old, denotes finished goods, not raw materials.[14]

We believe that the goal of accounting education is to prepare the student to be a practicing accountant, not to prepare him to learn to be one, and, with this belief, we analyze the best process of educating accountants.

It is well accepted that professional accounting is partly an art and partly a science (or more precisely, a technology).[15] Auditing and examination of the books of accounts and the financial records of corporations and the handling of mass data can serve as examples of the scientific aspects of the accounting profession. Ethical behavior, relationships with clients and colleagues, fraud detection, and so forth, on the other hand, can serve as examples of the artistic aspect of the accounting profession.

The scientific or technical part of accounting knowledge deals mainly with the analysis of similar problems for which there are well-defined methods for seeking solutions. Procedures for auditing of financial statements, for example, are clear and may be found in manuals and textbooks. There are common methods of assuring that the financial statements are based upon and are in agreement with the books of accounts of the audited firms, that the entries in the books of accounts were made on the basis of documents, and that these documents are authentic and can serve as evidence for the validity of the records. Answers to most technical questions which arise in the process of auditing of financial statements may thus be found in manuals.

[12] R. M. Trueblood, in "The Future of Accounting Education" (Graduate School of Industrial Administration, Carnegie Institute of Technology, 1960, p. 36), quoted in D. Solomons and T. M. Berridge, *Prospectus for a Profession* (Gec, 1974), p. 100.

[13] American Institute of Certified Public Accountants, Commission on Standards of Education and Experience for CPAs, *Report of the Commission on Standards of Education and Experience* (New York: AICPA, 1956), p. 114.

[14] Quoted in Solomons and Berridge, *Prospectus*, pp. 111-12.

[15] American Institute of Certified Public Accountants, *Review and Resume: Accounting Terminology Bulletin No. 1* (New York: AICPA, 1956), pp. 7-13.

The artistic part of accounting knowledge deals mainly with heterogeneous problems to which there is no well-defined method for seeking solutions. Issues concerning the behavior of the CPA and his relationships with his clients may serve as an example. Such issues vary from one case to another and from client to client. The code of professional conduct portrays the lines according to which the CPA should act, but it does not serve as a detailed guide to the many variants of personal issues. Methods of solving such personal or interpersonal problems are usually acquired by imitating the experienced professional accountant, not by referring to manuals. Fraud detection and special investigations in cases of merger or acquisition may serve as other examples for areas in which there are no well-defined methods for seeking solutions to problems that arise during the process of executing the tasks.

The scientific part of the accounting knowledge has the qualities of professional knowledge that is best transmitted through the formal educational system: college education. The artistic part of the accounting knowledge, on the other hand, does not have these qualities. Thus, it must be transmitted through an informal system of education: practical experience.

The experience requirement serves as the informal system of educating accountants and as the major process for transmitting artistic professional skills and knowledge they need in order to assume their duties as independent public accountants. Nevertheless, Solomons and Berridge note that recent developments in the accounting profession have increased the relative share of the scientific (technical) aspect of the profession vis-à-vis the artistic aspect.[16] They thus feel that "with the quickening pace of change there is more and more reason to question the value of experience which depends on the past and does not necessarily point to future developments." Moreover, they claim that "with the development of analytical techniques for problem-solving in business, there is more need to learn the techniques and less need to rely on judgment that comes from experience."[17] Solomon and Berridge's argument is based on the assumption that there is an increasing need for technical knowledge and a decreasing need for judgment in performing professional duties in accounting. They thus suggest that an educational process which emphasizes the study of analytical techniques will supply the student with methods adequate for seeking solutions to a great number of real-life problems.

[16] Solomons and Berridge, *Prospectus,* p. 102.
[17] Ibid.

It is the contention of the current authors that the increasing number of areas and the complexity of the subjects with which the accounting profession deals strengthens the need for an experience requirement in accounting education. The growing number of areas which accountants encounter, such as management advisory services, auditing of local governments, and social accounting coupled with the quickening pace of change in the business environment and the increasing volume and complexity of financial data, generate a clear move toward greater specialization in the accounting profession. This does not imply, however, that the role of judgment in the accounting profession is changing from a profession to an occupation. It is true that in some areas of specialization, technical knowledge is used extensively. Other areas, on the other hand, have become extremely complex. In these areas, the accountant faces a variety of complicated problems for which no explicit method for seeking solutions is available. Artistic knowledge is thus used extensively in these areas. In fact, the involvement of professional accountants in purely technical areas is decreasing, while these areas are increasingly occupied by paraprofessionals. More complex areas, by contrast, such as management accounting, internal auditing, and bank auditing, have grown in status and have even secured recognition as self-governing professional accounting specializations.

It is significant that all of these new specializations require formal experience prior to certification. This suggests that their certification boards view the experience requirement not as a means to acquire past (backward) knowledge, but rather as a means for the trainee to learn the artistic aspects of the profession. The same logic should apply in the case of the experience requirement for independent public accountants. Subjects (such as ethics and responsibilities of the professional accountant, personal relations with clients, specific tax problems and especially inheritance tax problems, tax planning, forming an opinion on the efficiency of operations of local governments, inquiring into and handling cases of illegal activities and improper payments and fraud detection) cannot be taught solely in regular courses, or even in courses which use the case method. The "artistic" knowledge required for dealing with such subjects requires, in addition to formal studies, on-the-job training.

In exhibit 4, some major areas within the accounting profession are sorted according to the types of problems with which they deal, methods of search for solutions, and the professional knowledge they require. For some areas, experience is an essential part of the educational

process; for others, it is an important part. Accounting education with no experience requirement will provide only limited professional training. Such education cannot develop the skills needed for professional performance in many sophisticated areas.

There seems to be a consensus (as is inflected by the Beamer Report) that experience is an important part of accounting education and that the current experience requirements fail to provide relevant training. It was, however, suggested that a year of college study substitute for experience. On the basis of the analysis presented in the present paper which noted the importance of experience in educating accountants, it seems that the solution to this problem is not the elimination of the experience requirements but rather that the accounting profession should develop and institute effective means of providing practical experience prior to certification.

Exhibit 4. Types of Accounting Problems

Methods of search for solutions	*Types of problems* *Homogeneous*	*Heterogeneous*
Analyzable	Auditing Accounting "Technical"	Management advisory services "Engineering"
Unanalyzable	Special accounting issues Special auditing issues "Crafts"	Special investigations Tax planning Ethics Relations with clients Audit of efficiency Illegal activities Improper payments "Artistic"

Analysis of Efficiency by Means of Interrelated Indicators: A Yugoslav Approach

IVAN TURK*

Yugoslavian enterprises, with rare exception, belong to the social sector. They are independent organizations reacting to the market system, while the question of planning is decided by negotiations and agreements. They are not, however, established as associations of capital, or of socially owned resources, but as autonomous and self-managing organizations of workers as employed persons, linked together by their common interest in the joint efforts. Because of the socioeconomic peculiarities of Yugoslavian enterprises, they are designated as "work organizations." In such work organizations, self-management means that each worker who belongs to it decides, together with the other workers, on his or her own and for the common interest, not only his or her own work organization, but also that of the wider spheres of the social community. Self-management does not begin in the work organization; all larger work organizations are divided into more basic organizations of associated labor (BOALs) and into one or more work communities.

Under Article 320 of the Associated Labor Act,

workers shall have the right and duty to form a part of a work organization

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as a basic organizing unit, under the following conditions: (1) That such a unit is part of a working whole; (2) That the results of the joint labor of workers in the working whole being formed as a basic organization can independently be expressed in terms of value within the work organization or in the market; (3) That workers, as a basic self-managing group, can in this working whole realize their socio-economic and other self-management rights.

On the other side, under Article 400 of the Associated Labor Act,

workers who perform administrative-professional, auxiliary and similar affairs of common concern to basic organizations operating within a work organization establish one or more work groups for the performance of common affairs.

Statements of financial position (balance sheets) and income statements are prepared separately for each BOAL and work group. In these accounting statements, a special place is given to specific socio-economic categories. Between them, the central role is given to income, that is, the difference between revenues and material costs after at least a minimum allowance for depreciation.

Under Article 51 of the Associated Labor Act,

income of basic organizations shall be allocated by workers for: (1) The personal incomes and collective consumption of workers, the promotion and expansion of the material base of labour and the creation and renewal of reserves in basic organizations; (2) Ensuring the common and general conditions of labor and the development of society. The part of income of basic organizations allocated for the needs mentioned in section 1, paragraph 1 of this Article shall represent the net income of basic organizations.

Under Article 53 of the Associated Labor Act,

the following common and general conditions of labour and society development shall be ensured from the income of basic organizations: (1) Resources for the satisfaction of collective needs in the areas of education, science, culture, health, social welfare and other social activities, . . . and resources for the satisfaction of collective needs in the area of social security; (2) Resources for the satisfaction of general social needs within the framework of socio-political communities; (3) Resources for other needs specified on the authority of law . . . .

While in the income statements, the central role is given to income in the sense of a newly created value; in the statements of financial position (balance sheet), the distinction is made between business assets and other assets; business assets constitute fixed assets, current assets, and investments from these assets. In addition to business assets, there are reserve assets and common consumption assets.

Ideas included in the Yugoslavian indicators of efficiency are best understood with the help of a simplified structure of both accounting

statements. The statement of financial position is always divided into substatements in the frame of one statement:

Statement of Financial Position

Assets	Equities
Business assets (fixed and current assets, business investments) Unrecovered loss	Business fund Business obligations
Reserve assets	Reserve fund
Common consumption assets	Common consumption fund Obligations for common consumption assets

On the other side, the income statement is divided into separate substatements as follows:

Statement of Determination of Income

Expenses	Revenues
Material costs and minimum depreciation in goods sold	Revenues from goods sold and other ordinary revenues
Extraordinary expenses	Extraordinary revenues
Balance = Income	Balance = Loss on material costs and minimum depreciation

Statement of Allocation of Income and Determination of Net Income

Expenses	Income
Taxes on income (for satisfaction of general social needs within the framework of sociopolitical communities) Contributions from income (for satisfaction of collective needs in the spheres of education, science, culture, etc.) Contractual and other expenses for current business needs from income (interest, insurance premiums, cost of payment traffic, depreciation accounted in excess of minimum rates, transfer to work communities, etc.)	Income
Balance = Net income	Balance = Loss on obligations out of income

Statement of Allocation of Net Income and Determination of Accumulation

Expenses	Net income
Personal incomes (composed from net personal incomes and taxes on and contributions from personal incomes)	Net income
Addition to the common consumption fund	
Balance = Accumulation	Balance = Loss on personal incomes

Statement of Allocation of Accumulation

Allocation	Accumulation
Addition to the reserve fund	Accumulation
Addition to the business fund	

Statement of Determination and Coverage of Loss

Loss	Coverage
Loss on material costs and minimum depreciation	Reduction of the reserve fund
Loss on obligations from income (reduced by interest, insurance premiums, cost of payment traffic, and some other items)	Donations
	Temporary reduction of the business fund
Loss on personal incomes	
Uncovered loss at the beginning of the period	Balance = Uncovered loss at the end of the period

Under Article 140 of the Associated Labor Act, the results of the labor of workers and of the business of basic organizations must be reported through the following indicators:

I-1 $\dfrac{\text{Income}}{\text{Workers}}$

I-2 $\dfrac{\text{Income}}{\text{Business assets}}$

I-3 $\dfrac{\text{Net income}}{\text{Workers}}$

I-4 $\dfrac{\text{Accumulation}}{\text{Income}}$

I-5 $\dfrac{\text{Accumulation}}{\text{Net income}}$

I-6 $\dfrac{\text{Accumulation}}{\text{Business assets}}$

I-7 $$\frac{\text{Personal incomes and addition to the common consumption fund}}{\text{Workers}}$$

I-8 $$\frac{\text{Net personal incomes}}{\text{Workers}}$$

On the basis of Article 143, the following indicators were added:

II-1 $$\frac{\text{Taxes and contributions from personal incomes}}{\text{Workers}}$$

II-2 $$\frac{\text{Taxes and contributions from income}}{\text{Workers}}$$

II-3 $$\frac{\text{Accumulation and depreciation}}{\text{Business assets}}$$

II-4 $$\frac{\text{Business assets}}{\text{Workers}}$$

II-5 $$\frac{\text{Revenues}}{\text{Expenses before determination of income}}$$

II-6 $$\frac{\text{Revenues}}{\text{Current assets}}$$

II-7 $$\frac{\text{Loss}}{\text{Workers}}$$

II-8 $$\frac{\text{Realized income}}{\text{Planned income}}$$

II-9 $$\frac{\text{Realized personal incomes}}{\text{Planned personal incomes}}$$

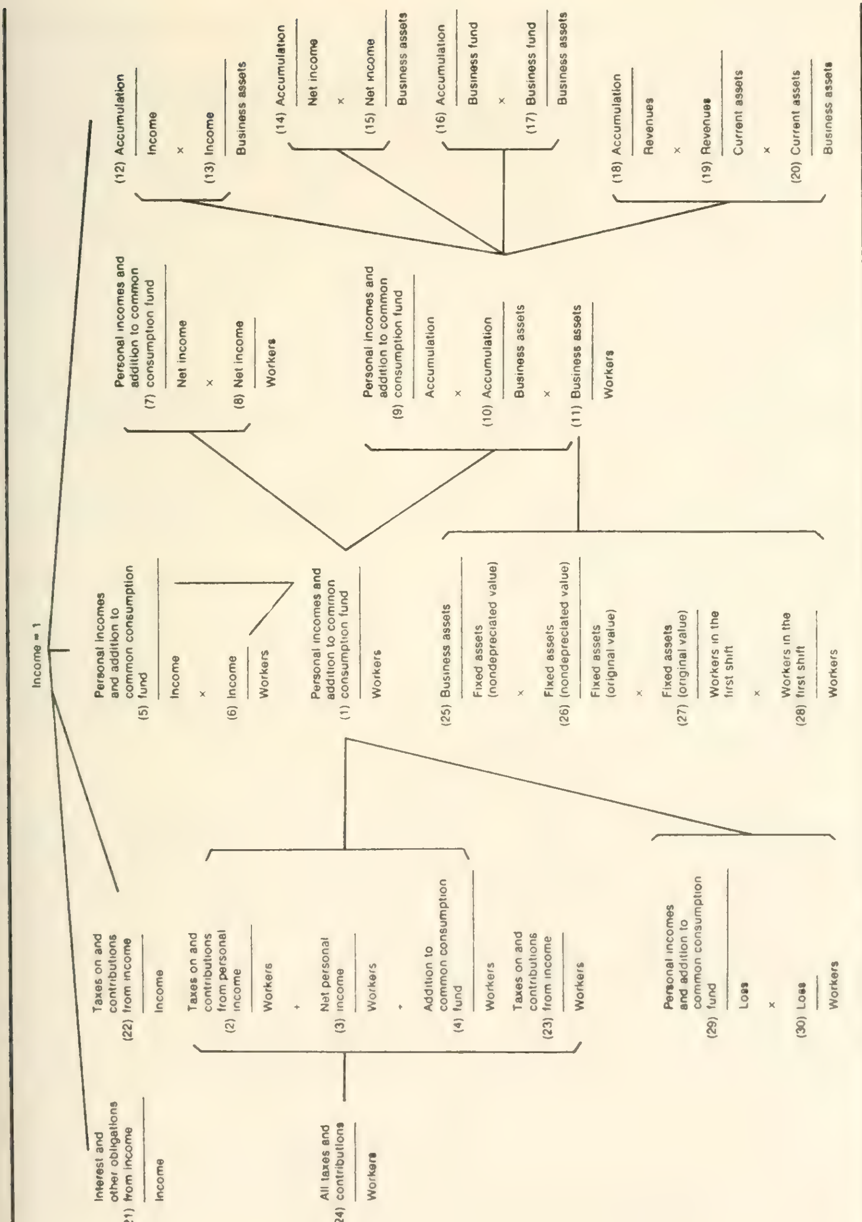
At this point, the author does not intend to discuss either the communicative power of each of these indicators or the methodological problems of comparing each of the indicators computed for different organizations in the same period of time or for the same organization for different periods of time. He does stress, however, the fact that there is no single indicator which could give a basis for an outside judgment of the efficiency of a BOAL. Each indicator mentioned can provide only the basis for a very limited judgment. The difficulty lies in the fact that different indicators have varying dynamics, or they even move in quite opposite directions. Hence, a judgment of the efficiency of a BOAL can be formed only when we have succeeded in relating these different indicators to a system of interdependent indicators where each is functionally dependent on the others. Only in this way does it become possible to achieve an adequate interpretation of the whole.

In Western countries, one of the powerful tools for decision making and control of efficiency can be found in linked indicators on a basis

of the rate of return (for instance, those of Du Pont and General Electric). Considering Yugoslavian conditions and socioeconomic peculiarities, this author developed a new system of interrelated indicators several years ago. In this system, he included all prescribed indicators and some others in addition as missing links. The general idea of this system can be seen in exhibit 1.

A short explanation of each indicator follows:

1. Coefficient of personal income and addition to common consumption fund per worker; prescribed as I-7 expressing the general level of satisfaction of personal needs.
2. Coefficient of taxes on and contributions from personal income per worker; prescribed as II-1.
3. Coefficient of net personal income per worker; prescribed as I-8 expressing the initial interest of workers as consumers.
4. Coefficient of addition to common consumption fund per worker; not prescribed, but used in business policy.
5. Rate of personal income and addition to common consumption fund to income; not prescribed, but used in business policy.
6. Coefficient of income per worker; prescribed as I-1 with certain similarity to macroeconomic category of national income per capita.
7. Rate of personal income and addition to common consumption fund to net income; not prescribed, but used in business policy.
8. Coefficient of net income per worker; prescribed as I-3 with certain similarity to macroeconomic category of national income without taxes per capita.
9. Coefficient of proportion of allocation of net income; not prescribed, but used in business policy.
10. Coefficient of return on business assets; prescribed as I-6.
11. Coefficient of proportion of the pooling of labor and resources; prescribed as II-4.
12. Rate of accumulation to income; prescribed as I-4.
13. Coefficient of socioeconomic return on business assets; prescribed as I-2.
14. Rate of accumulation to net income; prescribed as I-5.
15. Coefficient of reduced socioeconomic return on business assets; not prescribed.
16. Coefficient of return on own capital; not prescribed, but of extreme importance for judging efficiency of business on the basis of comparison with the interest rate for loans.
17. Coefficient of financial independence; not prescribed, but very important.


Income = 1
(21) Interest and other obligations from income
Income
(22) Taxes on and contributions from income
Income
(24) All taxes and contributions
Workers
(2) Taxes on and contributions from personal income
Workers
+
(3) Net personal income
Workers
+
(4) Addition to common consumption fund
Workers
(23) Taxes on and contributions from income
Workers
(29) Personal incomes and addition to common consumption fund
Loss
×
(30) Loss
Workers
(5) Personal incomes and addition to common consumption fund
Income
×
(6) Income
Workers
(1) Personal incomes and addition to common consumption fund
Workers
(25) Business assets
Fixed assets (nondepreciated value)
×
(26) Fixed assets (nondepreciated value)
Fixed assets (original value)
×
(27) Fixed assets (original value)
Workers in the first shift
×
(28) Workers in the first shift
Workers
(7) Personal incomes and addition to common consumption fund
Net income
×
(8) Net income
Workers
(9) Personal incomes and addition to common consumption fund
Accumulation
×
(10) Accumulation
Business assets
×
(11) Business assets
Workers
(12) Accumulation
Income
×
(13) Income
Business assets
(14) Accumulation
Net income
×
(15) Net income
Business assets
(16) Accumulation
Business fund
×
(17) Business fund
Business assets
(18) Accumulation
Revenues
×
(19) Revenues
Current assets
×
(20) Current assets
Business assets

18. Rate of accumulation to revenues; not prescribed, but used in business policy.
19. Coefficient of turnover of current assets; prescribed as II-6.
20. Rate of current assets to business assets; not prescribed, but in use.
21. Rate of interest and other obligations from income to income; not prescribed.
22. Rate of taxes on and contributions from income to income; not prescribed.
23. Coefficient of taxes on and contributions from income per worker; prescribed as II-2.
24. Coefficient of all taxes and contributions per worker; not prescribed.
25. Inverse rate of fixed assets to business assets; not prescribed, but introduced in this form because of the need to combine indicators 26 to 28.
26. Rate of nondepreciated value of fixed assets to original value; not prescribed, but in general use.
27. Coefficient of fixed assets per worker in the first shift; not prescribed, but in use.
28. Rate of first shift workers to total number of workers; not prescribed, but in use.
29. Coefficient of personal income and addition to common consumption fund to loss; not prescribed.
30. Coefficient of loss per worker; prescribed as II-7.

In addition to the system of interrelated indicators described here are coefficient II-3, known as an indicator of reproduction ability, coefficient II-5, which shows the economic rationality in achieving income but is completely indifferent to the substitution of factors, as well as indices II-8 and II-9 which must be explained in more detail with regard to the causes of differences.

In all of these cases, the word *coefficient* was used for the relation between different but comparable economic categories, the word *rate* for the relation between a part and the whole of the economic category, and the word *index* for the relation between the achieved and the planned value of the given economic category or the relation between the achieved value during a given period and the achieved value in the preceding period. In the written discussions, these words are frequently applied inconsistently. A short explanation of the mutual relations of the treated indicators follows.

The workers clearly enter the BOAL in order to ensure for themselves, among other things, the continuing satisfaction of their personal

needs. Hence, they are first interested in the indicator (1), gross personal income per worker. While the numerator is on the whole not problematic, the denominator requires at least that the number of workers be established in terms of the number of those working full-time, as some workers have a longer, others a shorter, working time. If, for the sake of comparing this indicator, since it appears in different BOALs, we wish to exclude the influence of the changed qualificational structure, it would additionally be necessary to establish the number of workers conditionally unskilled. The dynamics of the real gross personal income per worker is obtained when the indicator for the years in question is corrected with the indices of prices. Personal income and addition to common consumption fund per worker is still a category which must be explained analytically. Therefore, it is useful to divide the indicator in the following way:

Coefficient of personal income and addition to common consumption fund per worker (1)

=

Coefficient of taxes on and contributions from personal income per worker (2)

±

Coefficient of net personal income per worker (3)

+

Coefficient of addition to common consumption fund per worker (4).

Now we are faced with the question of how to explain the coefficient of personal income and addition to common consumption fund per worker (1) in the broader context of the conduct of business in the BOAL. It is possible to relate it to income as a newly created value. Thus, we have the following mutual relation:

Coefficient of personal income and addition to common consumption fund per worker (1)

=

Rate of personal income and addition to common consumption fund to income (5)

×

Coefficient of income per worker (6).

Taken by itself, a higher income per worker does not necessarily mean greater efficiency in the conduct of the business, irrespective of the circumstances in which the workers perform the work. The improved equipping of workers with the means of work makes for higher income per worker, but as a rule it cuts the share of gross personal income in the overall income.

It is also possible to explain the coefficient of gross personal income per worker (1) by means of the following indicators:

Coefficient of personal income and addition to common consumption fund per worker (1)

=

Rate of personal income and addition to common consumption fund to net income (7)

×

Coefficient of net income per worker (8).

By net income, we mean the income from which the taxes on and contributions from the income as well as other obligations from income have been deducted but which includes personal income and addition to common consumption fund as well as accumulation. A higher net income per worker is in the situation of an unchanged income per worker resulting from smaller taxes, contributions, and other obligations, which in the BOAL are to be deducted from the income. We now no longer calculate per worker the taxes on and the contributions from income, but rather that part of income which is distributed among the workers themselves as gross income and addition to common consumption fund income or which remains in the BOAL as accumulation. However, we still cannot see a higher net income per worker while disregarding the role of the resources a higher efficiency in the conduct of business.

The following indicators are significant for the interpretation of the personal income and addition to common consumption fund per worker (1):

Coefficient of personal income and addition to common consumption fund per worker (1)

=

Coefficient of proportion of allocation of net income (9)

×

Coefficient of return on business assets (10)

×

Coefficient of proportion of pooling of labor and resources (11).

In each BOAL, labor and resources are pooled, and the proportion of the pooling is indicated by the indicator (11). In the BOAL, net income is distributed for the needs of the workers (personal incomes and addition to common consumption fund) and the needs of the BOAL itself (accumulation); therefore, the indicator (9) is clearly of interest. But whereas the part of the net income distributed for

personal incomes and addition to common consumption fund can be assessed only in the relation to the workers — see indicator (1) — the part of the net income distributed for the accumulation can be assessed only in the relation to the assets, that is, by the indicator (10).

If we calculate the real or the time indices for each of these indicators, we can adequately interpret the index of the personal income and addition to common consumption fund per worker (1) by the indices from the indicators (9), (10), and (11).

The indicator of the personal income and addition to common consumption fund per worker (1) is clearly outstanding by its excessive importance to the workers as consumers. However, for management in the BOAL, the indicator of return on business assets (10) is without doubt among the important ones. Whether the sum of the accumulation may be indicative of the results of good conduct of business or not can be assessed only if the sum is compared with the business assets. Hence, it is not so important how high the accumulation is in comparison with income or net income, but how fast the rate by which social resources are being increased is. Thus, good conduct of business is, from the viewpoint of the BOAL, manifested in both the increase of the personal income and addition to common consumption fund per worker (indicator 1), as well as in the return on business assets (indicator 9). These indicators have a direct action power.

So far we have offered a somewhat more detailed explanation of the indicator of the personal income and addition to common consumption fund per worker (1); now, the same is in order for the indicator of the return on business assets (10). Here the following relation between indicators can be used:

Coefficient of return on business assets (10)

=

Rate of accumulation to income (12)

×

Coefficient of socioeconomic return on business assets (13).

Higher socioeconomic return on business assets (13) does not necessarily mean better management of the business. This indicator is significant primarily for the assessment from a wider social viewpoint where attention is focused on how social resources enable the BOAL to create income. Otherwise, the indicator says nothing about the conduct of business regarding the resources and their increase. In view of the circumstances, the larger indicator, as such, may not permit any expanded reproduction, while in others even a lower indicator may make it possible.

There is also an opportunity to express the return on business assets (10) with the help of the following indicators:

Coefficient of return on business assets (10)

=

Rate of accumulation to net income (14)

×

Coefficient of reduced socioeconomic return on business assets (15).

We think, however, that the explanation of the indicator of the return on business assets (10) can be rather more expressively presented by the indicators

Coefficient of return on business assets (10)

=

Coefficient of return on own capital (16)

×

Coefficient of financial independence (17).

Still more important is the interpretation of the indicators of return on business assets (10) by technical business indicators where the following mutual relation is obtained:

Coefficient of return on business assets (10)

=

Rate of accumulation to revenues (18)

×

Coefficient of turnover of current assets (19)

×

Rate of current assets to business assets (20).

By calculating the real and the time indices for each of these indicators, we shall arrive at a good interpretation of the index of the return on business assets (10) by means of the indices (18) to (20).

The burden of interest and other obligations from income of the taxes on and contributions from the income can be seen from the following indicators:

Income (expressed as 1)

=

Rate of interest and other obligations from income to income (21)

+

Rate of taxes on and contributions from income to income (22)

+

Rate of gross personal income to income (5)

+

Rate of accumulation to income (12).

To determine the average burden of the taxes and contributions which the workers in a given BOAL pay, we need the following equation:

Coefficient of taxes and contributions per worker (24)

=

Coefficient of taxes on and contributions from income per worker (23)

+

Coefficient of taxes on and contributions from personal income per worker (2).

Further, we must offer an integration of the proportion of the pooling of labor and resources (11). Here we shall need the following indicators:

Coefficient of proportion of the pooling of labor and resources (11)

=

Inverse rate of fixed assets to business assets (25)

×

Rate of nondepreciated value of fixed assets to original value (26)

×

Coefficient of fixed assets per worker in the first shift (27)

×

Rate of first shift workers to total number of workers (28).

By calculating the real and the time indices for each of these indicators, we are again in a position to interpret adequately the proportion of the pooling of labor and resources (11) by means of indices (25) to (28).

Finally, in the case of a loss, we can establish the following relations among indicators:

Coefficient of personal income and addition to common consumption fund per worker (1)

=

Coefficient of personal income and addition to common consumption fund per loss (29)

×

Coefficient of loss per worker (30).

We can therefore see how the indicators of the conduct of business may be related to a certain system, but we can speak of the system of indicators only when the indicators are interrelated through addition and multiplication. In such a system, each indicator occupies a fixed place: it is used to interpret other indicators, and in turn these serve to interpret it. This alone can represent the dialectical interrelationship

of the indicators. All this requires that some of the indicators be presented in a way different from that to which we are accustomed in the literature and in the applied field. We are specifically referring here to the fact that traditionally, the relation between one amount and the other is very often multiplied by 100, which gives the percentage rate instead of the rate, or the percentage index instead of the index, and so forth. To omit the multiplication by 100 is certainly a minimal requirement easy to satisfy.

Norwegian Standards for Annual Reporting Requirements and Chart of Accounts

ARNE RIISE*

INTRODUCTION

Recently there has been an increasing interest in international accounting issues. There also seems to be a trend toward international harmonization of accounting disclosures, although there is much to be accomplished before international accounting uniformity is approached, if that is at all desirable.[1] In the meantime, accounting disclosure requirements and accounting standard developments in various countries should be viewed in light of the political, legal, financial, and cultural environments, among others.[2] A study of the accounting disclosures within this frame of reference might reveal causes for similarities and differences in various countries. An attempt will be made in this paper to discuss the Norewegian development of accounting disclosures and standards within the framework described. Although Norway is a small country with minor influence on the world economy, there is a growing foreign interest in Norwegian corporations due to the North Sea oil discoveries.

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[1] For a discussion of this issue, see Desmond McComb, "The International Harmonization of Accounting: A Cultural Dimension," *International Journal of Accounting* (Spring 1979): 1-16.

[2] See, for example, Frederick D. S. Choi and Gerhard Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978), pp. 23-28.

POLITICAL, LEGAL, AND FINANCIAL ENVIRONMENT

General Background

Measured by the gross domestic product per capita (1976),[3] Norway is listed sixth after Kuwait, Sweden, Switzerland, Canada, and the United States. Foreign trade is extremely high, with exports/imports approximately 50 percent of the gross national product (GNP). The investment rate is very high, with gross investment about 36 percent of GNP. The inflation rate (consumer price index) has averaged about 10 percent annually during the period 1975 to 1978. In 1979, the inflation rate was markedly lower (6 percent), partly due to a price and wage stop.[4]

The Political and Economic System

The economic system is basically market oriented but with a heavy amount of state intervention and control which limit the companies' freedom of action. The state is a major stockholder in some of the larger corporations; in some cases, the state even owns more than 50 percent of the shares.

The state's influence on the financial sector is very heavy, and the total lending by financial institutions is strictly regulated. To increase this influence, a new law in 1977 determined that 8/15 of the "representantskap" of the commercial banks (the highest controlling body) is to be elected by the parliament or the county council, 4/15 by the shareholders, and 3/15 by *the employees of the bank.* Due to the heavy restrictions imposed on the owners (shareholders) by this act, the shareholders can, if desired, demand to have their shares redeemed by the state at the exchange rate per January 1, 1978, or the average exchange rate of the three preceding years.

The equity capital in Norwegian corporations is very low compared to most accepted standards; for 1976, it averaged approximately 16 percent. The supply of capital to enterprises and private persons for 1976[5] originated from:

	%
Foreign sources	40
State banks	20
Commercial banks	12
Saving banks	9
Loan associations	8
Issues and bonds	3

[3] United Nations, *Yearbook of National Accounts Statistics,* vol. II (1977).
[4] Central Bureau of Statistics, *Statistical Yearbook 1978* (Oslo, Norway, 1978).
[5] Ibid.

Issues of shares	3
Other sources (insurance companies, etc.)	4

Accounting Legislation

The determination of financial disclosures in Norway is basically legalistic. The most important laws determining the financial information requirements are the Companies Act and the Accounting Act. However, the approach is not entirely legalistic. The laws only determine the minimum requirements, and the financial disclosures are greatly affected by two institutions:

1. Since the laws often refer to "good accounting practice," there is a need to determine what this term means. The Institute of Chartered Accountants issues a variety of recommendations regarding various accounting issues which greatly influence the reporting practice.
2. The Norwegian Standard Association (NSF), which is a member of the International Organization for Standardization, has in the past issued recommendations regarding the structure of the accounting system (the accounting plan) in order to facilitate recording and retrieval of information for financial reports. However, the structuring of the accounting plan cannot be isolated from the format specifications of the financial statements, and the tendency has been to include this area as well. NSF's objective is to further standardization in various fields, such as the sciences and technical area, within product specification, trade, and accounting. Thus, in accordance with the other recommendations by this organization, the accounting recommendations are termed "accounting standards."

The recommendations by these two organizations are not compulsory, but the recommendations are to a great extent obeyed and are regarded as semiofficial.

Cultural Influence

Before and during World War II, the cultural influence in accounting matters was basically from Germany. In later years, this influence has been mainly from the United States. For example, most academics in the field have had at least one year of sabbatical leave in the United States, and several faculty members have a doctorate from a university in the United States. In addition, it is also natural for a small country with a large foreign trade and heavy foreign financing to recognize general international trends in accounting disclosures.

Despite the minor importance of the private capital market, there is a very active Financial Analysts Society working to activate the

capital market. This society has also had a certain influence on the requirements of the previously mentioned acts and has in addition influenced the accounting disclosures by criticizing the annual reports.

BRIEF HISTORY OF ACCOUNTING STANDARDS

The first standard chart of accounts and corresponding accounting plan appeared in 1947. At the same time, a standard accounting terminology was issued. The chart of accounts, partly based on Schmalenbach's Chart of Accounts and the Swedish M-Chart,[6] includes financial as well as cost accounts, as shown in exhibit 1.

Exhibit 1. Norwegian Chart of Accounts, 1947

Inactive accounts	*Active accounts (with many transactions)*								
Assets and liabilities	*Financial accounts*	*Inventories*	*Costs and expenses*	*Costs*	*Cost centers*	*Products*	*Cost of goods produced/sold*	*Revenues*	*Results and final accounts*
0	1	2	3	4	5	6	7	8	9
Financial accounts				*Cost accounts*				*Cost and financial accounts*	

One main reason for issuing a standard accounting plan and terminology was the general lack of knowledge of accounting, and the chart and the terminology worked as excellent educational devices.

In 1970, the accounting plan was revised. The 1970 Standards Committee argued that the basic need at that time was a more uniform basis of information for financial statements and statistics required by the government institutions. With regard to cost accounting, the committee represented the view that the firms were so different with respect to type, size, organization, product-costing methods, EDB-technical means, and so on, that a uniform accounting plan could not be developed. In addition, the educational level by then enabled the companies to develop their own tailored systems. The resulting chart of accounts was, therefore, very simple with only four classes specified.

[6] See Gerhard G. Mueller, *International Accounting* (New York: Macmillan, 1967), ch. 4.

Exhibit 2. Norwegian Chart of Accounts, 1970

Financial accounts		*Cost accounts*	*Financial accounts*	
0	1	2-7	8	9
Assets, liabilities, owners' equity	Costs by type	At disposal	Revenues	Results

Despite the seemingly simple structure of the chart, the accounting plan was structured to facilitate easy retrieval for financial reporting and official statistics. For cost accounting, the comment section indicated some fairly general models for various types of industry and trade.

THE DEVELOPMENT AFTER 1976

In 1977, a new Companies Act took effect, as did a new Accounting Act in 1978. The Accounting Act covers all companies not specified by the Companies Act. Generally, there is no difference between the two acts concerning information requirements. The disclosure requirements of these acts are far more detailed than were earlier ones, and they are partly different in scope. It was recognized that the Accounting Plan of 1970 was not particularly suited as a basis for these requirements. There was also a growing dissatisfaction with the cost accounting section of the plan, which for larger firms should enable accounting for responsibility centers and profit centers, as well as for products, product groups, markets, customer groups, and special projects. Small firms, on the other hand, might need only a simple cost accounting system or no cost accounting system at all. Therefore, to avoid confusion and too many individual approaches, the Norwegian Standards Association in 1976 established a committee to propose a new standard chart of accounts and accounting plan. In addition, the committee was to revise the standard accounting terminology of 1947.

The committee agreed on the following principles as a basis for the development of the chart of accounts and the accounting plan.

1. The internal requirements were so varied that it would be impossible to develop a standard plan for cost accounting. Therefore, it was decided to concentrate on a plan for the financial accounts.
2. The plan should enable easy retrieval for financial statements. The first objective would be, therefore, to propose a standard for financial statements.

3. The plan should be applicable for small and large firms and for computerized as well as manual systems.

4. To simplify coding requirements, the plan should consider the number of transactions and timing of transactions. Thus, one should attempt to put approximately the same number of accounts in each class which would minimize the code for each transaction.

5. International trends should be considered.

6. If one could induce various official authorities to agree on a certain structure of information requirements, this would greatly simplify the structuring of an accounting plan. Thus, the tax authorities and the Central Bureau of Statistics were asked to harmonize their information requirements with those of the corporate and accounting acts.

ANNUAL REPORTING REQUIREMENTS

Despite considerable effort by numerous bodies to develop a general theory of accounting and to identify objectives of financial statements, the result is still questionable.[7] There is, therefore, no well-founded justification for the resulting requirements. However, the committee decided on some general criteria.

1. The disclosures should enable easy comparison between companies.

2. Fairly disaggregated data with subtotals and totals would enable the users of financial statements to extract the data that are deemed necessary.

3. Operational and financial data, as well as ordinary and extraordinary items, were segregated.

4. Tax-conditional "manipulations" should be separately disclosed.

5. At least two years' consecutive data should be included in the same report.

In addition, the standards committee negotiated with various authorities acceptance of a common structure of information requirements. An agreement was finally reached, and thus a common standard covering the format of the financial statements and the reports for the Central Bureau of Statistics and the tax authorities were proposed. After hearings, certain revisions were made, and the statements and the accounting plan were announced as standards in September 1977. The proposed terminology became standard in February 1979.

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[7] See, for example, Nicholas Dopuch and Shyam Sunder, "FASB's Statement on Objectives and Elements of Financial Accounting: A Review," *Accounting Review* (January 1980): 1-21.

The Balance Sheet

The major structure of the balance sheet is as follows:

Assets	Liabilities and equity capital
Current assets	Short-term debt
Fixed assets	Long-term debt
Special items	Investment funds and other funds subject to special tax rules
	Equity capital

Among specific disclosure requirements are specifications of shares in other companies; amount of loans granted to shareholders, directors, and employees; and outstanding accounts with companies of the same group. The more specific items required in the balance sheet are shown in Appendix 1. A comparison of Norwegian, U.S., and U.K. disclosure requirements is shown in exhibit 3.[8]

Exhibit 3. Number of Balance Sheet Items in Norwegian, U.S., and U.K. Disclosure Requirements

Norway 62 items (plus 12 subtotal figures)
United States 65 items
United Kingdom 39 items

The Income Statement

To avoid differences in specification and thereby confusion by statement users, the various income concepts should be clearly defined. The new standard specifies five different income figures: (1) operating income before depreciation, (2) operating income, (3) income including the effect of financial items (before extraordinary items), (4) income including extraordinary items, and (5) the year's profit (loss). In addition, detailed disclosures of various items are required. For example, since gross revenue is to be disclosed, government taxes and fees are shown as separate deductions. Received subsidies should also be disclosed separately. Among expenses, the total amount of raw material and labor should be disclosed as separate items.

In case some of the material and labor costs have been used for internal building projects, and so forth, the amount used for this purpose may appear as a technical correction among the revenues (see item 4 in Appendix 2). Other details are shown in the Appendices.

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[8] George J. Benston, "Public (U.S.) Compared to Private (U.K.) Regulation of Corporate Financial Disclosure," in *Notable Contributions to the Periodical International Literature 1975-78* (Sarasota, Fla.: American Accounting Association, 1979), pp. 71-85.

There are thirty-seven items in total to be shown separately in the Norwegian standard, plus fifteen subtotals or income figures; there are fifty-three in the United States and thirty-seven in the United Kingdom.[9]

These specifications of the balance sheet and the income statement enable the preparation of a wide variety of ratios. The various ratios are clearly defined in the terminology section. Thus the new standard will give better and more coherent information and facilitate comparison between companies. This is in contrast to the earlier situation, when one experienced a wide variety of definitions and items included in the statements and the various ratios.

OTHER REQUIRED INFORMATION

Companies with total assets exceeding 10 million (Norwegian krone), or with more than 200 employees, or whose shares are quoted on the Stock Exchange are required to disclose the amount and change in "hidden" reserves in inventories. These companies are also required to give the gross amount of investment in ships, machinery, equipment, and property for each of the last five years. In addition, such companies are required to prepare a funds statement and an interim report at least every half year. When the standard was being prepared, there was some discussion whether to specify a standard for the funds statement or not. Based on the reasoning that there was too little agreement with respect to the specification of such a statement at that time, only a recommended prototype was proposed.

CHART OF ACCOUNTS

Based on the proposed format of the balance sheet and the income statement, a chart of accounts and a standard accounting plan were proposed. According to principle 2 (see page 107), the structure of the plan should enable easy retrieval for financial statement purposes. As will be seen from the Appendices, there are certain corresponding accounts for each item in the statements. With a few exceptions, the accounts are summed up in ascending order, for example, to obtain revenue from goods and services, all accounts in classes 30 to 32 are totaled.

According to international trends, little emphasis was placed on developing a plan for cost accounting, which is relegated to class 9. However, class 9 can be expanded to ten new classes by placing a prefix (for example, 9) before each class, that is, cost accounting will contain classes 90, 91, to 99. This is comparable to all of the latest

[9] Ibid.

European charts of accounts[10] which use all the classes except 9 for the financial accounts. In accordance with the Swedish plan, class zero is deleted because some smaller accounting machines cannot start with a zero (see principle 3).

Compared to the German and French plans, fewer classes in the Norwegian plan are used for the balance sheet accounts. This is due to the fact that there are normally a smaller number of accounts and fewer transactions on these accounts (principle 4). Materials, goods, work in progress, and so forth, and inventory changes are given a separate class; the same is true of labor and labor-related costs. These items are usually the most important ones of the total costs, and thus flexible specification of these items is important in order to supply information for financial reporting as well as internal uses. The classification of the chart of accounts is given in exhibit 4. Further details may be found in the Appendices.

Exhibit 4. The Norwegian, French, and German Chart of Accounts

	Norwegian Standard Chart of Accounts 1977	*French Plan Comptable Generale 1957*	*German Industry Chart IKR 1971*
0	Omitted	(Contingent liabilities)	Fixed assets and intangibles
1	Assets	Capital, reserves, and loans	Finance
2	Liabilities, capital, and reserves	Fixed assets and investments	Stocks, debtors, and prepayments
3	Revenues by type	Stocks	Capital and reserves
4	Materials, goods, and purchased services	Personal accounts	Other liabilities
5	Labor and related costs	Liquid asset	Sales
6	Other costs by type	Cost by type	Material and wages depreciation
7	Ditto	Revenues by type	Interests and taxes
8	Financial revenues and costs, extraordinary items, results, and final accounts	Results and final accounts	Opening and final accounts including results
9	Cost accounts	Cost accounts	Cost accounts

[10] The French Plan Comptable Generale (1957); the German Industry Chart (IKR-1971); and the Swedish Basic Accounting Plan (BAS 1976).

REQUIREMENTS NOT COVERED BY THE STANDARDS

These standards primarily prescribe *what* items are to be reported and the format of the statements. The valuation and some other rules are explicitly expressed by the laws discussed. The requirement that the annual financial statements shall be filed with the Registrar of Companies is included. This is a new practice which will open the possibility for public inspection of the annual reports. Further, according to the Companies Act, a parent company is a company that holds the majority of the votes in another company. The law also specifies certain requirements for consolidated income and balance sheet statements for the group.

For valuation of assets, the law gives the following general rules.

Current assets shall not be valued higher than actual value and not higher than acquisition cost.... Actual value is sales value less sales expenses.

Fixed assets shall not be valued higher than at acquisition cost.

Thus, there is no lower limit of valuation, which implies that accumulation of "hidden reserves" in inventories and fixed assets is acceptable. The tax law, on the other hand, sets limits for depreciation policies and inventory valuation. In addition, the Companies Act also asks for information on inventories and extraordinary depreciation according to the tax rules. Thus, normally the companies to a great extent value assets according to the tax rules.

The new Companies and Accounting Acts together with the standards discussed here will give more, better, and clearer information for security analysis and other uses of annual reports. However, the laws and the standards do not cover every possible reporting and valuation aspect. Thus, the law often refers to "good accounting practice." This is a challenge which has been accepted by the auditing profession. Since the two laws were issued, the Institute of Chartered Accountants has issued a number of recommendations regarding good accounting practice.

DISCUSSION

Norway has chosen the legislative approach to guarantee a certain minimum quality of accounting disclosures. In addition, semiofficial standards for the accounting plan and financial statement formats have been issued by the Norwegian Standards Association.

Arguments against uniformity standards have been advanced particularly by North American and British accountants based on the fact

that reporting standards are more advanced in these countries than elsewhere.[11] This, however, may be due mainly to the fact that the securities markets in the United States and the United Kingdom are more sophisticated than elsewhere, and it would be difficult to estimate how advanced annual reporting in other countries would have been without such imposed standards.

It is conceivable that accounting concepts and standards will be more difficult to change under such a system, and it might be more difficult to keep the standards up-to-date. On the other hand, when the new standards are issued, the entire body of firms is lifted to a fairly high general reporting level. Also, the law and the standards represent a minimum requirement, and it is possible to deviate from the standards if this is done according to "good accounting practice," as recommended by the Institute of Chartered Accountants, for example. Thus, it might be argued that the more advanced companies are not discouraged from disclosing more information, but the least willing are forced to report at a fairly high level.

It is also often argued that international harmonization is hampered by rigid national standards. However, the standards committee will study other standards and reporting requirements and thus incorporate relevant aspects of the latest developments and proposals. Therefore, national uniform standards might lead to a more rapid international harmonization than would other approaches. This does not mean that this approach is appropriate for all countries; it might not be for the United States and the United Kingdom, for example.

In addition to the pro and con arguments just presented, this author envisages several advantages of a standardized approach, such as:

1. The attainment of a higher degree of conformity in data specification. This enhances greater comparability among financial data of different companies and different industries. Thus, the time and cost of security analysis are reduced, and the quality of analysis is increased.
2. More reliable national income statistics are obtained.
3. Teaching and training of accountants are greatly simplified.
4. This will in turn ease the transferability of know-how and skills where personnel move from one firm to another.
5. The independent auditors' task is simplified due to the general structure of accounts and financial statements.
6. The costs of developing individual accounting systems are reduced. This is particularly true for small and medium-sized firms which often

[11] See, for example, Mueller, *International Accounting,* pp. 109-13.

lack the means and experience for this purpose.[12] Also, standard software packages will be more readily applicable.

7. Cost of retrieval is greatly reduced because of the integrated information requirements by government agencies and for financial statement purposes.

8. Normally, only minor modifications in accounts will be necessitated by mergers and take-overs.[13]

As will be apparent from these arguments, the author believes that the arguments in favor of uniformity standards, not too strictly enforced, are more convincing than the arguments against. This, however, may be largely contingent on the particular circumstances in various countries.

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[12] This is cited as a possible disadvantage by Mueller. However, this seems to be based on the earlier fairly rigorous accounting plans with cost accounting as an integrated part.

[13] This is also cited as a possible disadvantage by Mueller. The reason might be the same as that mentioned in the previous footnote.

APPENDIX 1. THE BALANCE SHEET

Main item	*Minimum specification*	*Accounts in the accounting plan*	
B 1.1 Cash, financial items, and short-term receivables	Cash	101	Same text as in the balance sheet
	Bank and postal/giro accounts	103 108	Same text as in the balance sheet
	Shares	111	Same text as in the balance sheet
	Bonds and other securities	112 118	Bonds Other securities
	Bills receivable	114 115	
	Trade debtors	121 −129	Debtors Expected loss on debtors
	Short-term intercompany receivables	126	
	Other short-term receivables	128 13 14	Other short-term receivables Value-added subsidies, etc. Prepaid costs
Sum B 1.1			
B 1.2 Inventories, etc.	Inventories raw materials	151	
	Inventories semimanufactures and work in process	152 153	
	Inventories finished goods	155	
	Prepaid to suppliers	158	
Sum B 1.2			
Current assets	B 1.1 + B 1.2		
B 2.1 Long-term receivables and investments	Shares in subsidiaries	161	
	Other shares	162	Other shares, long-term
	Bonds and other securities	163	Securities, long-term
	Long-term intercompany claims	166	
	Loans to shareholders, board members, etc.	164	
	Loans to employees	165	
	Prepayment to suppliers	167	
	Other long-term receivables	168	
	Patents and similar rights	171	
	Goodwill	173	
	Capitalized costs	174	(e.g., R & D)
Sum B 2.1			

Main item	*Minimum specification*	*Accounts in the accounting plan*	
B 2.2 Fixed assets	Transportation equipment including ships	181 182 183	Ships Cars Other
	Machinery, equipment, and the like	184 185 186	Machinery Equipment
	Buildings	191	
	Plant under construction	188 192 193	Machinery under construction Buildings under reconstruction Unfinished buildings
	Land and forests	194	
	Mines, quarries, waterfalls, etc.	195	
	Houses (for employees)	197	
Sum B 2.2			
B 2.3 Unpaid share subscriptions and own shares	Unpaid share subscriptions Own shares	168 169	
Sum B 2.3			
Sum B 2	Sum fixed assets		
B 3	Total assets		
B 4 Short-term debt	Suppliers	20	
	Bills payable	211 214 216	Bills to suppliers Accommodation bills Intercompany bills
	Overdraft facilities	218	
	Withheld payroll tax, national insurance contribution, etc.	22	
	Withheld value-added tax, etc.	23	
	Unpaid payroll, holiday allowance, etc.	241 242	
	Accrued interest	243	
	Unpaid dividends	268	
	Accrued unassessed taxes for current year	251	
	Assessed unpaid taxes	252 254	

Main item	*Minimum specification*	*Accounts in the accounting plan*	
	Advances from customers	261	
	Other short-term debt	262 265 266 267 268	Debt to employees Guarantee debt Intercompany debt Short-term loans Other short-term debts
Sum B 4	Short-term debt		
B 5 Long-term debt	Long-term intercompany debt	276	
	Bearer bonds	271	
	Mortgage loans	272	
	Convertible loans	273	
	Other long-term debt	274 279	Hire-purchase contracts Silent partnership capital Subordinated loan capital
Sum B 5			
B 6 Conditional taxfree allocations	Investment funds	281 282	
	Regional development funds	283	
	Profit on sale of assets	284	
	Initial depreciation on plant under construction	285	Allocation for initial depreciation on plant under construction
	Write-downs on contracts of purchase (price-fall risks)	286	
	Write-downs on inventories (price-fall risks)	287	
	Other tax-free allocation	289	
Sum B 6			
B 7 Equity capital	Share capital	291	
	Statutory reserve	292	
	Revaluation fund	293	
	Free reserves or uncovered loss	294 295 296 299	Free reserves (specified) The year's profit The year's loss Uncovered loss
Sum B 7			
B 8	Sum of liabilities and equity capital		

APPENDIX 2. INCOME STATEMENT

Main item	*Minimum specification*	*Accounts in the accounting plan*	
R1 Operating revenue	Sales revenue from goods and services	30 31 32	Sales revenue
	(Minus) Government taxes on goods sold	33	
	(Plus) Government subsidies	34	Same text as in the Income Statement
	Self-produced assets	35	
	Rent from fixed assets	36	
	Other operating revenues	37 38 39	
R2 Operating expenses	Usage of raw materials, semimanufactures, and purchased goods for resale	40 · · · 48	Raw materials, semimanufactures, parts, packing materials, etc.
		49	Inventory changes
	Wages and salaries	50 51 52 53	Wages and fees
	National insurance and pension expenses	54	
	Other personnel expenses	55 to 59	
	Freight and commission for goods sold	60	
	Other purchasing, manufacturing, and selling and administrative expenses	61 · · · 77	
	Losses on accounts receivable	789	
	Inventory changes, finished goods, semimanufactures, etc.	791 · · · 799	
R3 Operating income before depreciation	$R_1 - R_2$ (except depreciation)		

Main item	*Minimum specification*	*Accounts in the accounting plan*	
R2 (cont.)	Ordinary depreciation	781 · 783	Depreciation on machines, buildings, etc.
R4 Operating income	R1 − R2		
R5 Financial revenues	Dividends from subsidiaries	801	
	Dividends on other shares	802	
	Interest from companies of the same group	806	
	Other interests	807	
	Agio and other financial revenues	808 809	
R6 Financial expenses	Interest to companies of the same group	816	
	Other interests	811	
	Agio loss and other financial expenses	818 819	
R7 Result of financial items	R5 − R6		
R8 Result before extraordinary items	R4 + R7		
R9 Extraordinary revenues	Gain on sale of fixed assets	82	
	Government and local grants or subsidies	831 832	
	Other extraordinary income	833 834 835 836 84	Donations Gifts Contribution from shareholders Intercompany contributions Sundry extraordinary income
R10 Extraordinary expenses	Loss on sale of fixed assets	851 852 · · · 854	Loss on sale of machines Loss on sale of buildings, etc. Loss on sale of shares/stocks
	Write-down of fixed assets	859	

Main item	*Minimum specification*	*Accounts in the accounting plan*
	Gifts, donations	86
	Sundry extraordinary items	87
R11 Result of extraordinary items	R9 − R10	
R12 Result before year-end (tax-related) adjustments	R8 + R11	
R13 Year-end adjustments	Revaluation of fixed assets	88 · · · 89 Various accounts for year-end adjustments
	Release conditional tax-free funds	
	Extraordinary tax — conditional depreciation	
	Extraordinary tax — conditional fund allocations	Plus various balance sheet accounts
	Taxes	
R14 The year's profit (loss)	R12 ± R13	

Accounting for Construction Companies, Inflation, and Market Efficiency: Analysis of an Israeli Case

DAN GIVOLY and JOSEF LAKONISHOK*

INTRODUCTION

One of the fundamental issues which accounting regulatory and policy-making bodies confront is that of identification of the users of financial information and the needs and the ability of such users to interpret the information properly. The development of the efficient market theory led to an accumulation of empirical research which offered some evidence on the issue. In particular, the question of whether the investing public correctly interprets financial reports has until recently been answered affirmatively. Moreover, management attempts to manipulate income have been found by the efficient market studies to be futile. Despite this evidence, the controversy concerning the necessity, propriety, and adequacy of present and future disclosure rules has not subsided. What keeps the issue alive is not necessarily the detachment of the regulatory agencies from recent research but rather the strong feeling among investors and accounting practitioners that the findings are counter-intuitive.

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This feeling is supported not only by evidence of an anecdotal nature but also by recent empirical results (see for example Basu, Watts, and Givoly and Lakonishok)[1] which, contrary to the earlier finding regarding an efficient market, indicate that the market does, at times, react slowly to new information. In such instances, alert investors could exploit superior knowledge or competence to gain abnormal profit, thus putting naive investors who lack those qualities at a clear disadvantage.

If decision makers are indeed naive, the consequences of a discord between economic reality and the content of financial reports could be serious: stock prices might not reflect the "true" value of the company, thus leading to misallocation of resources at the macro level and to nonoptimal composition of portfolios at the level of the individual investor.

The discord between economic reality and its depiction by accounting reports, as well as the difficulties of investors in interpreting these reports, is more pronounced during times of inflation. In a recent survey of financial analysts in Israel, a country plagued by three-digit inflation, it was found that only 13 percent of the senior analysts seemed to have some understanding of the impact of inflation on various income statement and balance sheet items.[2] This lack of awareness of the exact impact of inflation on historical cost accounting reports was observed in an economy which has otherwise adapted quite well to a prolonged inflation (among the manifestations of its adaption are prevalence of indexed transactions, concentration on real rates of return, and the keen awareness of timing of cash flows). There are indications that difficulties in interpreting historical reports at times of inflation and even in understanding adjusted reports are common to investors in the United States. In a recent study, Modigliani and Cohn contend that stocks in the United States are consistently underpriced and explain this situation as the failure of financial analysts to adjust financial statements properly to inflation.[3]

[1] S. Basu, "Investment Performance of Common Stocks in Relation to Their Price-Earnings Ratios: A Test of the Efficient Market Hypothesis," *Journal of Finance* (June 1977): 663-83; R. Watts, "Systematic 'Abnormal' Returns after Quarterly Earnings Announcements," *Journal of Financial Economics* (June-September 1978): 127-50; and Dan Givoly and J. Lakonishok, "The Information Content of Financial Analysts' Forecasts of Earnings: Some Evidence on Semi-Strong Inefficiency," *Journal of Accounting and Economics* (Winter 1979): 165-85.

[2] Dan Givoly and J. Lakonishok, "Some Characteristics of the Israeli Stock Market: A Survey Study of Financial Analysts" (Working Paper, Tel-Aviv University, April 1979).

[3] F. Modigliani and A. Cohn, "Inflation and the Stock Market," *Financial Analysts Journal* (March-April 1979): 24-44.

Financial reporting by construction companies which are characterized by a long production cycle presents some of the most difficult measurement problems. Furthermore, the reported results of these companies are particularly sensitive to the effects of inflation. The purposes of this paper are to discuss some of the unresolved accounting issues involved in the financial presentation of a construction company and to analyze the effect of the selected accounting methods on the reported income and on the stock prices. It will be shown that the joint application of several widely accepted methods led to inadequate and meaningless financial presentation. It will be further demonstrated that investors were, in general, incapable of eliminating the distortive effects of inflation and of the method of income recognition on the reported income. As will be analyzed in this paper, the accounting veil succeeded in misleading not only naive investors but also the presumably sophisticated and well-informed members of the board of directors.

The subject of the inquiry is the Rasco Company, a medium-sized construction company operating in Israel. It was selected for the study for several reasons: the relatively complicated and mostly unresolved issues associated with measuring its income; the peculiar impact of inflation on its reported earnings and financial position; the observed misleading effect of the reporting procedures on its board's decisions, and the interesting reaction of the stock market to its reported results. Finally, the company was selected because of the access the authors had gained to its records which are usually unavailable to outsiders.

The case of the Rasco Company demonstrates the issues of financial reporting and financial statement interpretation in times of inflation. Given the continuous high rate of inflation in the United States, the findings of this paper have direct implications on the financial reporting of the construction industry in the United States.

THE CONSTRUCTION INDUSTRY IN ISRAEL AND THE RASCO COMPANY

Occupying 10 percent of the labor force and comprising 15 percent of the gross national product (GNP), the construction industry dominates the economy of Israel. This situation is a result of the unusual growth rate of the country's population in the last thirty years (5 percent annually), primarily due to mass immigration.

One of the pronounced features of a construction industry which has been extensively investigated in the economic literature is its cyclical nature (on the evidence and implications of the construction

cycles, see Hansen[4] and Abramovitz[5]). The significant growth rate in population and the existence of uncontrolled and largely unexpected immigration intensify the volatility of construction in Israel. The following table reflects the construction starts (in millions square meters) in selected years and demonstrates the degree of instability experienced by the industry:

1968	*1970*	*1972*	*1974*	*1975*	*1976*	*1977*	*1978*
3.8	6.0	8.6	7.5	6.3	5.6	4.7	5.7

The Rasco Company is a public corporation that engages in the construction and selling of residential and commercial buildings and in contractual construction. The company, which is the second largest construction company in Israel, employs 2,500 workers and had a portfolio of projects of approximately $70 million (valued at cost) on March 31, 1978. Almost all of its operations are conducted in Israel. Due to the high rate of inflation in Israel (average annual rate of 45 percent over the last five years), customers require some protection against cost increases. Builders commonly provide such relief from future cost increases in return for a significant down payment by the customer. The percentage of the down payment tends to increase in periods identified as a sellers' market and drops in periods characterized as a buyers' market. In a typical transaction, an apartment buyer is given two alternative down payments: 40 percent or 70 percent, with the remaining amount spread over the construction period (usually two years). The installments are interest free but under the first alternative, the balance due is linked to the official cost of construction index. Customers finance part of the down payment by private or government mortgages. Contractual works (governmental, commercial, and industrial projects) are financed by the customer either in the form of a significant advance payment which guarantees a fixed price, or in the form of payments spaced according to the pace of construction and adjusted to the cost of inputs. The builders, in turn, hedge against future cost increases by investing the proceeds in land, construction materials, and indexed government bonds which guarantee positive real rate of return.

CHARACTERISTICS OF THE ISRAELI STOCK MARKET

The Tel-Aviv Securities Exchange (TASE) on which bonds and

[4] A. Hansen, *Business Cycles and National Income* (New York: Norton, 1964), chap. 3.

[5] M. Abramovitz, *Evidence of Long Swings in Aggregate Construction since the Civil War* (Princeton, N.J.: Princeton University Press for NBER, 1964).

shares are traded is the only organized exchange in Israel. Securities of 101 companies are listed on the exchange. Some facts concerning the Israeli securities market are provided in exhibit 1. It can be seen that the importance of the stock market as an object of investment to individuals and a source of new capital to corporations has increased in recent years. During 1978, the volume of trade was IL 14,296 millions, and IL 5,393 million worth of new stocks were issued. (The average exchange rate during 1978 was IL 17.5 = $1.)

Recent empirical tests on the efficiency of the TASE reveal that this market is efficient in the weak form, that is, no significant dependencies exist in the time series of stock returns.[6] The market appears also to be efficient in the semistrong form, at least to some publicly available information.[7]

Relatively little attention has been given by the financial and accounting literature to the role of information in the determination of stock market efficiency. The quality of accounting information, the extent of voluntary financial information, the competence of investors and financial analysts, and the equity in the availability of information to investors are some of the determinants of stock market efficiency. The inefficiency (in the semistrong form) of the Israeli stock market could be traced to the operation of these determinants.

The quality of accounting information in Israel is severely reduced by the high rate of inflation. The delay in the publication of the annual reports (the average release date is 140 days after the end of the year compared to 40 days in the United States),[8] which is due in part to the small size of the typical accounting firm and to the underdeveloped internal control systems, further diminishes the usefulness of the financial statements. The absence of interim reports (not required in Israel) makes the delay in the publication of the annual report even more critical.

Israeli investors are not overwhelmed by abundant voluntary information from corporations. In fact, except for short press releases in the wake of the publication of the annual reports, other information is not usually made available during the year. One explanation for this insensitivity to the needs of the investing public is the small degree of reliance that Israeli corporations have on the stock exchange for

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[6] A. Arbel and A. Barnea, "Some Features, Efficiency Tests and Investment Strategies in the Israeli Capital Market."

[7] H. Levy, M. Smith, and M. Sarnat, *The Stock Exchange and the Investment in Securities* (Tel-Aviv: Schocken Publishing, 1978).

[8] D. Givoly and D. Palmon, "Timeliness of Annual Earnings Announcement: Some Empirical Evidence" (Working Paper 79-109, Graduate School of Business Administration, New York University, 1979).

Exhibit 1. Developments in the Tel-Aviv Stock Exchange, 1971-1978

	1971	*1972*	*1973*	*1974*	*1975*	*1976*	*1977*	*1978*
Shares								
Volume of issues at 1978 prices (IL mil.)	372	1,236	3,241	1,605	2,164	1,529	6,009	5,393
Real rate of return (%)	19	87	−34	−27	6	9	35	3
Volume of trade at 1978 prices (IL mil.)	744	4,744	3,280	1,925	2,077	2,904	17,089	14,296
Bonds in Israeli currency								
Volume of issues at 1978 prices (IL mil.)	5,620	11,569	15,775	13,208	11,173	5,016	8,378	8,042
Real rate of return (%)	1	5	2	−4	8	11	2	1
Volume of trade at 1978 prices (IL mil.)	2,566	4,218	5,486	11,047	9,375	7,815	7,976	6,850

their new capital. The availability of subsidized government loans makes the issue of new stock a less attractive way of raising capital.

Another factor that reduces the efficiency of the Israeli stock market is the scarcity of skilled and competent disseminators of financial information. As indicated by the Committee on Corporate Disclosure[9] of the Securities and Exchange Commission (SEC), the existence of such disseminators is a distinct complementary and essential ingredient of the corporate disclosure system. A recent survey of Israeli financial analysts by Givoly and Lakonishok revealed a poor knowledge of accounting principles and procedures and an inability to interpret financial statements properly by those involved in the preparation of such statements.[10]

Finally, the dominance of institutional investors in the trading and particularly in the holding of corporations' stock leads to their monopoly over timely and relevant financial information. Small investors, aware of their disadvantageous position, tend to regard the stock market more as a gamble than as an investment channel. This attitude leads to adverse effects on the stability of the stock market and on the usefulness of financial statements.

ACCOUNTING PRACTICES AND ISSUES

Generally Accepted Accounting Principles (GAAP) in Israel

The 3,600 certified public accountants in Israel are organized in a voluntary association, the Israeli Institute of CPAs (IICPA). The Professional Committee of this body is the counterpart of the now defunct Accounting Principles Board (APB), and suffers from the same weaknesses that led to the abolishment of the latter body—namely, scarce preparatory research, staffing on a part-time basis by very busy practitioners, and inadequate representation of legitimate views and interests of wide segments of the financial community. The *Gilouy Da'ath* or opinions of the IICPA provide the basis for GAAP in Israel. Nineteen IICPA opinions have been issued so far, yet important issues such as earnings per share, accounting for income tax, consolidations, leasing, and inflation accounting are not dealt with by any of the pronouncements of the IICPA. As a result, GAAP in Israel are usually broadened to include accounting principles and measurement procedures formulated either by the International Accounting Standards Committee or by professional bodies in leading countries such as the United States or England. Unless otherwise specified, the

[9] Securities and Exchange Commission, *Report of the Advisory Committee on Corporate Disclosure* (Washington, D.C.: Government Printing Office, 1977).
[10] Givoly and Lakonishok, "Israeli Stock Market."

term GAAP will be used here to describe accounting principles which are acceptable both in Israel and in the United States.

With respect to the construction industry, the IICPA in April 1971 issued Opinion 6 which requires the use of Shitat A'avodot Ha'gmurot, loosely translated as the completed-contract method, for recognition of income from construction of apartment buildings for sale. The opinion allows the use of Achuz Ha'hashlama or the percentage-of-completion method for the recognition of income derived from contractual projects if two conditions are met: (1) substantial portion of the work has been completed, and (2) reliable estimates of the cost to completion and the realizable price are available. The opinion also requires that, regardless of the method used for income recognition, an allowance for future losses be established once such losses are expected.

Certain accounting practices used by the Rasco Company are of interest and will be discussed and evaluated here.

Income recognition. Income whether originating from contractual work or from sale of apartments (self-initiated projects) is recognized according to the completed-contract method.

Provision for future losses. A provision is made in the income statement for each individual project whose total cost is expected to exceed total proceeds. The provision is established when such excess costs are first foreseeable.

Each of these practices is in line with IICPA Opinion 6 (as well with GAAP in the United States). In view of the volatile nature of the construction industry and the high inflation rate in Israel, however, the combined effect of these policies on the reported income of Rasco is particularly distortive. As will be demonstrated, the reported earnings numbers in the Rasco Company's statements are of little meaning and are, at best, loosely related to the real economic income. Only a careful and thorough analysis of financial data which are usually unavailable to the general public can produce an estimate of the economic income. The following is a detailed discussion of the accounting issues involved in the selection of each of the practices mentioned.

Income Recognition

Two methods are available for the accounting for long-term construction-type contracts: the percentage-of-completion method (POC) and the completed-contract method (CC). Most companies in the United States engaging in long-term contracts use POC for income recognition

(86 percent, according to the 1979 *Accounting Trends and Techniques*).

In most countries, GAAP allows the use of both methods for measuring income from contractual construction projects. The implicit preference of each method, however, varies somewhat. For instance, under IICPA Opinion 6, the use of CC is always acceptable, while POC is allowed only when a high degree of certainty exists with respect to future costs and revenues. Accounting Research Bulletin 45, in contrast, states that whenever dependable estimates of future cost of completion exist, POC is preferable. This is also the position of the Institute of Chartered Accountants in England and Wales (Statement of Standard Accounting Practice No. 9[11] and by the International Accounting Standards Committee.[12] More pronounced preference for POC is implicit in the recent exposure draft of the American Institute of Certified Public Accountants (AICPA) of a proposed statement of position on the accounting for performance of construction-type and certain production-type contracts.[13] Although the same criteria set forth by ARB 45 for the selection of the methods are used, the statement suggests that the two methods "should not be used as acceptable alternatives for the same circumstances." The statement goes further by indicating that "entities with significant contracting operations generally have the ability to produce reasonably dependable estimates and should use the percentage of completion method. . . ."[14]

All of the accounting pronouncements cited here, with the exception perhaps of the recent AICPA statement of position, establish one criterion for the selection of the method: the accuracy or reliability of cost estimates. The assessment of the degree of reliability is left to the judgment of the accountant. The accountant, however, is not commissioned to introduce as his selection criteria other considerations such as the lessening of relevance and meaningfulness of earnings numbers that might be caused by resorting to the completed-contract method. (A similar situation exists in other areas, for instance, the selection between accrual accounting and installment accounting for land development companies.) One might envision circumstances in

[11] Institute of Chartered Accountants in England and Wales, *Statement of Standard Accounting Practice No. 9: Stocks and Work in Progress* (London: ICAEW, 1975).
[12] International Accounting Standards Committee, *Accounting for Construction Contracts,* IAS 11 (London: IASC, 1979).
[13] American Institute of Certified Public Accountants, Exposure Draft, *Audit and Accounting Guide for Construction Contractors* (New York: AICPA, 1980).
[14] Ibid., p. 96.

which the distortion introduced by CC is so great that it should be abandoned in favor of POC, even in the absence of very reliable estimates of future costs. In such cases, POC could be applied in a conservative manner by using, for instance, the highest (most pessimistic) estimate of cost to completion in determining the degree of completion.

It is important to note that to the extent that conservatism is the motivation behind selecting the completed-works method, the outcome might often be contrary to those expected. Postponement of income recognition might indeed be achieved for each individual project, yet in the aggregate, the effect of *both* good and bad (not necessarily losing) years on the periodic income will be delayed.

Inflation conditions further emphasize the inadequacy of the completed-contract method. Deliberations on the selection of alternative accounting methods in the past tended at times to neglect the effect of inflation on the reported accounting numbers. The discussions on accounting for long-term contracts are no exception. If one sees merit in a method which results in reporting income and expenses in dollars with purchasing power closest to that of current dollars, then the percentage-of-completion method becomes superior to the completed-contract method. Under the latter, construction revenues and costs reported in the income statement primarily represent cash flows of prior years; thus, in times of high inflation, gross margins will be strongly affected by the average duration of projects. Moreover, net profits would tend to be understated due to the subtraction of periodic expenses stated in current dollars from gross margins expressed in dollars of yesteryears.

The Rasco Company uses the completed-contract method for its contractual projects (as well as for apartment buildings). The auditors of the company justify the use of the method by citing the unreliability of cost estimates caused by, among other things, the high rate of inflation. To assess the effect of the income recognition method on the reported income of Rasco, the company's accounts were reconstructed according to the percentage-of-completion method. For this purpose, the periodic revenue generated by each project was computed as the total actual revenue from the project multiplied by the ratio of project cost incurred during the period to the actual cost of the project.[15] The results are reported in exhibit 2.

[15] This procedure assumes that management had perfect knowledge of future costs and revenue. Although this assumption might not hold, there is no reason to believe that it introduces a systematic bias to the comparative results for the percentage-of-completion and the completed-contract method.

Exhibit 2. Gross Margins as a Percentage of Revenues

	1974/5	*1975/6*	*1976/7*	*1977/8*
		Buildings for sale		
Completed contract (reported)	35.8	35.4	25.4	8.1
Percentage of completion (restatement)	28.2	25.3	19.5	11.5
		Contractual projects		
Completed contract (reported)	16.2	16.6	4.7	7.5
Percentage of completion (restatement)	9.8	9.4	8.4	6.9

In both types of projects, the completed-contract method delays the impact of economic trends on the income statement. Under this method, the prosperous years of 1973 and 1974 were reflected primarily in the reported income of the slump years of 1975/6 and 1976/7.

As is evident from the industry data on page 124, the weakening of the industry condition began in 1974 and was gradual until the slump reached its lowest point in 1977. A partial recovery began toward the end of 1977, yet the gradual shift in business conditions resulted, under the completed-contract method, in an abrupt decline in reported income. Note that the sharp decline in earnings is more pronounced in contractual projects, the completion dates of which are stipulated by contract and therefore less subject to management manipulations.

The value of this smoothness property should not be easily discounted. One of the objectives of a financial statement, according to the Financial Accounting Standards Board (FASB), is "to help investors, creditors and others assess the amount, timing and uncertainty of prospective net cash inflows to the related business."[16] Smoothed series of earnings would tend to yield, ceteris paribus, more reliable estimates of future cash flows.

The percentage-of-completion method serves as a better barometer of changing business conditions, not only in terms of profitability rates but also in terms of absolute profits: during upswing periods, the extent of work performed and its gross margins increase while during slump periods, both shrink. On the other hand, the extent of completed projects in a given period is either insensitive to the change in business conditions during that period or even conversely related to it. The latter is likely to occur when, during slump periods, the completion of projects is speeded due to the availability of underutilized capacity.

[16] Financial Accounting Standards Board, *Statement of Financial Accounting Concepts No. 1* (Stamford, Conn.: FASB, 1978).

Although the analysis is based on the financial statements and economic environment of only one company, the arguments raised and the conclusions reached are of a general nature. To demonstrate further the generality of the conclusions, we used a simulation which produced relevant data for a typical company over many periods. The simulation generated, under a certain set of parameters,[17] the annual values for the following variables for a model construction company over a period of 5,000 "years": volume (gross margin) of new projects; gross margin under POC and under CC; cash flow, and GPL-adjusted gross margin under POC and under CC. The main results are summarized in exhibit 3.

Exhibit 3. Simulation Results: Correlation Coefficients (R^2) between Various Activities and Income Measures, No Inflation, 10 Percent Down Payment

Gross margin is a constant percentage (20%) of cost*

	*Cash** flow*	*Volume*** of new orders*	*Reported gross margin Under POC*	*Reported gross margin Under CC*
Cash flow	1	0.42	0.30	0.09
Volume of new orders		1	0.21	−0.02
GM under POC			1	0.13
GM under CC				1
Standard deviation	6.40	5.57	4.08	5.80

Gross margin percentage varies directly with the value (cost) of new orders (30% in good years, 20% in normal years and 10% in bad years)

	*Cash** flow*	*Volume*** of new orders*	*Reported gross margin Under POC*	*Reported gross margin Under CC*
Cash flow	1	0.37	0.28	0.24
Volume of new orders		1	0.26	−0.18
GM under POC			1	0.39
GM under CC				1
Standard deviation	8.62	9.91	6.99	7.63

* That is, prices are quoted as 120 percent of cost.
** 10 percent down payment.
*** (Cost) × (Percentage of margin).

[17] Following are the main parameters which underlie the simulation runs: cyclical behavior of the volume (cost) of new orders with a sinuous cycle of eight years (peak to trough) of an amplitude of 40 (e.g., peak = 140 normal year = 100 trough = 60); projects of three sizes, 20 percent of them small (10 percent of the cost of a medium-size project); 40 percent of them medium-size (50 percent of the cost of a large project); and 20 percent of them large. Each project progressed according to a randomly selected pattern of completion rate and delivery date (out of ten typical patterns). Cash flows paralleled completion pace with two alternative down payments, 10 and 70 percent.

The results indicate that under the conditions set by the simulation (conditions which are quite general and typical to a construction company), the gross margin reported under CC is not associated with two important measures of economic activity: cash flow and volume of new orders. The correlation between the gross margins under POC and the cash flow or the volume of new orders is quite strong. When gross margin percentages are allowed to fluctuate (as a function of the demand situation), the difference between the degree by which each of the two methods represents business "success" becomes even more pronounced.

The results reported in exhibit 3 assume no inflation. Inflation tends to increase spuriously the correlation between the gross margins reported (over time) under the two methods. Therefore, to evaluate the two methods' performance at times of inflation, general price-level adjustment (GPLA) was applied to the reported gross income. The following additional assumptions were made: there is an annual inflation rate of 20 percent; the projects are evenly divided between fixed-price 70 percent down payment projects and indexed-price, 10 percent down payment projects. On average, the reported gross margin under POC was approximately 4 percent below the corresponding GPLA margin, while the reported gross margin under CC was about 33 percent below its GPLA margin. If GPL-adjusted income is viewed as a measure of economic performance, the CC appears to understate systematically the "economic" income at times of inflation. This point is addressed further in the following section which discusses the effect of inflation on the reported income of the Rasco Company.

Provision for Future Losses

Regardless of the method used for income recognition, GAAP stipulates that a provision for future losses be established once such losses are foreseeable. International Accounting Standard No. 11 requires that such provision be made irrespective of the amount of profit expected to arise on other unrelated contracts. This asymmetry in treating profits and losses is a prominent feature of the principle of conservatism, yet the objective of useful measurement of periodic income is not best served by this loss provision. Its effect is to reduce income in the first year in which losses are expected while future years' income is left arbitrarily high. This is so because once provisions are made for losing projects, the income of future years will reflect the results from the remaining projects (for which no provision was necessary) which are likely to be profitable. This is particularly true for cyclical businesses experiencing instances that give rise to such provisions and,

consequently, the amounts provided annually are not evenly distributed over the years.

Furthermore, in slump periods, construction companies are sometimes willing to accept losing projects to maintain a minimum level of construction capacity (skilled employees, building equipment, and so on). Economically, only the difference between the contract price and the cost of the variable-disposable inputs (materials, unskilled workers) should be considered as a loss in such cases. As long as management acts rationally, no project with negative economic income (in the sense just stated) will be undertaken. The implication for accounting measurement is that provision is warranted only when a net loss on the aggregate portfolio of projects is expected.

In fact, not all cases of expected losses call for an immediate loss provision. ARB 45 specifies that "if there is a close relationship between profitable and unprofitable contracts, such as in the case of contracts which are parts of the same project, the group may be treated as a unit in determining the necessity for a provision for losses."[18] The recent "Proposed Statement of Position" (1980) is more specific on this point and details the conditions under which contracts might be combined. A somewhat similar situation exists in evaluating inventory: when market price of inventory falls below cost, a provision (a write-off) to reflect the loss is required. However, when a group of items is used in the production of an end product, adjustment to market, if necessary, is made with respect to the entire group or category, rather than to each individual item.[19] The reason for this exclusion is that such a group of items is disposed of jointly rather than separately, and hence only the *net* impact on income flow is expected to affect some future period. The same contention could be made with respect to construction projects: all projects (profitable and nonprofitable alike) are sure to be part of the income stream of future years. Moreover, the exit time (delivery time or rate of completion) of each project is stipulated by contract so that management cannot usually avoid or even defer losses by not working on or completing losing projects. In other words, it is the *net* result from a portfolio of projects that is reflected (in contract-determined "doses") in future periods' income. Therefore, it could be argued that only expected *net* losses on the entire operation should justify a loss provision.

[18] American Institute of Certified Public Accountants, *Accounting Research Bulletin, No. 45* (New York: AICPA, 1955), par. 11.

[19] American Institute of Certified Public Accountants, *Accounting Research Bulletin, No. 43* (New York: AICPA, 1953), par. 11; the need to adjust cost of inventory to market price is further confined to cases in which less than a normal profit is expected.

The adequacy of the requirement for a provision for future losses is particularly questionable at times of inflation. Consider the instance of fixed-price guaranteed contracts involving a large down payment. Under such contracts, which are quite common in Israel, project inputs but not prices are affected by the increasing cost of construction; the down payment is used by the contractor to hedge, in various ways, against inflation. The expected loss figure is not very meaningful since it is determined by matching future dollars of low purchasing power with income received in high purchasing power dollars of past years. When the expected inflation rate is high enough, nominal accounting losses would be recorded for many economically sound projects. To be sure, when cash advances are used to purchase materials and other inputs, thus securing their cost, no built-in accounting losses should result from inflation. However, the cost of some inputs (such as labor) cannot be secured. Also, some of the cash receipts are invested in real noninterest-bearing assets which are recorded at cost. Construction companies customarily invest some of the advances in land and building rights. The market appreciation of these assets may not be reflected in the income statements for years.

It might be argued that the loss on these projects due to the difference in timing between the early cash advances and the later incurrence of construction costs is offset in the income statement by the interest income (or the reduction of interest expense). This argument, however, does not hold since the resulting interest income accrues over time, while the loss under GAAP is recognized immediately.

The distortive effect of the provision of future losses caused by inflation is doubly magnified when combined with the application of the completed-contract method. In that situation, the gross margin on the completed projects, which is expressed primarily in terms of past dollars, must absorb expected losses expressed mostly in terms of future dollars. The result is usually a collection of uninterpretable and totally irrelevant figures.

IMPACT OF INFLATION

Inflation reduces the usefulness of historical cost financial statements; a high rate of inflation makes them almost uninterpretable in economic terms. In particular, the reported earnings numbers in times of inflation cannot be incorporated in a simple way in the evaluation process of investors: they cannot be compared with previous years' figures, nor can they serve in evaluating alternative investment opportunities.

Inflation rates in Israel in the last few years have been extremely high and were exceeded only by the inflation rates of some South

American countries. The following indicates the percentage increases in the consumer price index and the construction cost index in the last five years (March 31 to March 31):

	1973/4	*1974/5*	*1975/6*	*1976/7*	*1977/8*	*Five-year geometric mean*
Consumer Price Index	38	44	23	34	49	37
Construction Cost Index	44	43	18	36	46	37

It is obvious that under this level of inflation, all efforts to improve the relevance of the reported figures within the framework of an historical basis are useless. Even disclosure of selected items, such as current cost of goods sold and replacement-based depreciation, could not enable investors to grasp fully the meaning of the reported results. Only a comprehensive adjustment of the financial statements is needed to achieve this aim. The following is a description of the procedures employed in a comprehensive adjustment of the Rasco Company's reports to changes in prices and a discussion of the results obtained.

GPL-Adjustment Procedure

This adjustment of the financial statements was made in accordance with FASB's *Statement 33*.[20] The adjustments of a few items which are of particular interest will now be discussed.

Income from sales of buildings and completed contracts. Estimates of the distribution of income flows between and within years is necessary for the GPL-adjustment procedure. The accuracy of these estimates is extremely important when the inflation rate is high. Furthermore, in companies with long production cycles, reported income represents, in part, cash inflows of prior years, and an additional estimate of their timing becomes necessary. In the case of Rasco, both complicating factors, namely high rate of inflation and long production cycle, exist. Since collections from apartment buyers and receipts from contractual works have different timing patterns relative to their respective completion, separate estimates are required. To obtain these estimates, a representative sample covering approximately half of Rasco's projects was drawn. A careful examination of the transactions in each project was performed, and the timing of the related cash flows was determined. The following estimates of the timing of the cash inflows were derived (the year of completion is denoted by zero):

[20] Financial Accounting Standards Board, *FASB Statement No. 33* (Stamford, Conn.: FASB, 1979).

Year	*0*	*−1*	*−2*	*−3*	*All years*
Sales of buildings	16	45	39	0	100
Contractual projects	33	34	23	10	100

The timing distribution varied slightly over the years, but the differences were immaterial. The distribution of cash flows within the year were found to be almost even.

It is clear that the shortcut adjustment procedures that are occasionally proposed[21] might work well for a regular industrial firm operating under low rate of inflation,[22] but are grossly inadequate for firms with a long production cycle operating under a high rate of inflation.

Another conclusion that can be drawn from this discussion is that under certain conditions, disclosure of items, such as current cost of goods sold or current cost depreciation, is not sufficient for performance evaluation. A comprehensive adjustment which also relates to income flows and which cannot be made without the use of internal information is necessary.

Cost of buildings sold and completed contracts. The adjustment of costs, too, requires a detailed estimate of the timing distribution of cash flows. The same sample of projects which was used to produce the estimates of cash inflows served to derive the following estimates of the timing distribution of cash outflows:

Year	*0*	*−1*	*−2*	*−3*	*−4*	*All years*
Cost of buildings sold	29	38	25	3	5	100
Cost of contractual projects	33	34	23	10	0	100

Note that the timing distribution of the cost of contractual projects is identical to that of the income from these projects, reflecting the fact that the projects are fully financed by the customer. Note also that cash outlays associated with the construction of apartment buildings begin as early as four years before completion. This reflects the investment in land, planning, and so forth, which is sometimes made well before the actual construction begins.

Monetary and nonmonetary assets and liabilities. A phenomenon which is perhaps unique to Israel is the prevalence of indexed assets

[21] S. Davidson and R. Weil, "Inflation Accounting: What Will General Price Level Adjusted Income Statements Show," *Financial Analysts Journal* (January-February 1975): 27-31, 71-84; and E. J. Parker, "Testing Comparability and Objectivity of Exit Value Accounting," *Accounting Review* (July 1975): 512-24.

[22] E. Ketz, "The Validation of Some General Price Level Estimating Models," *Accounting Review* (October 1978): 952-60.

and liabilities. In fact, most long-term financial transactions in Israel, including labor contracts, are protected from exposure to inflation by linkage to some price index, usually the consumer price index. According to a pronouncement of the Israel Institute of CPAs, linkage differences on marketable securities and on long-term liabilities should be credited or debited to income as they accrue. For the purpose of GPLA, the adjusted balance of such items is treated as a monetary item, so that the gains from holding them will be offset against the linkage differences charged to income. The same treatment is given also to liabilities in foreign currency, since the effect of exchange rate changes is reflected periodically in the income statement.

The Adjusted Statements: Results and Implications

Exhibit 4 summarizes the effect of the inflationary adjustment on selected items in Rasco's income statement for the years 1975/6, 1976/7, and 1977/8. Three comparative figures are provided for each year: the reported historical number, the GPL-adjusted number stated in Liras at the end of each year, and the GPL-adjusted number stated in Liras at the end of 1977/8. It is apparent from the exhibit that the effect of inflation could not be ignored in evaluating the performance of Rasco.

The most striking feature of the exhibit is perhaps the sizable differences between the reported and the adjusted sales and costs. For example, the adjusted sales for 1978 are 91 percent higher than those reported. This difference is due not only to the inflation during 1978 (which explains only a small part of the difference), but also primarily to inflation of prior years during which the cash inflows associated with the works completed in 1978 had been generated.

A naive procedure for deriving a time series of sales or costs in real terms, under which the nominal series are deflated by the corresponding price indices, might lead, in the case of Rasco, to erroneous conclusions. Consider for instance, the increase in reported sales of 32 percent during 1976/7. Since the increase in the average price level from the previous year was 34 percent, the shortcut procedures would indicate a decline in real sales. Examination of the adjusted sales (in Liras of 1978) in the two years reveals, however, that real sales in fact increased. The wrong conclusion derived by the simple deflation of the nominal series stems from the failure to consider sales composition (buildings, projects), as well as the timing distribution of cash inflows represented by each year's reported income.

The decline in the reported profitability between 1975/6 and 1977/8 is preserved also under the GPL adjustment. However, the

Exhibit 4. Impact of Inflation on Selected Income Statements Accounts (millions IL)

	1975/6			1976/7			1977/8		
	Reported	*Adjusted**	*Adjusted (78)***	*Reported*	*Adjusted**	*Adjusted (78)***	*Reported*	*Adjusted**	*Adjusted (78)***
Sales	315	534	1,070	415	703	1,051	565	1,077	1,077
Cost of sales	243	387	776	348	564	843	501	922	922
Gross margin	72	147	294	67	139	208	64	155	155
Net profit before monetary gains	23	87	175	9	69	104	−25	49	49
Monetary gains		24	47		43	65		86	86
Net profit***	23	111	222	9	112	168	−25	135	135
Information on current value of land									
Holding gains in excess of general price increase***		−57	−114		−50	−75		195	195
Net profit after holding gains		54	108		62	93		330	330

* The adjusted figures are stated in Liras of the end of the current year.
** The adjusted figures are stated in Liras of the end of 1977/78.
*** Except for the GPLA, no further adjustments were made to the income tax expense.

absolute level of the reported gross margins is consistently and grossly understated relative to the real margins and to the gross margins of most other companies which use other methods of income recognition. The effect of the inflationary adjustment on 1977/78 results is to increase the gross margin by 143 percent and to convert a reported loss of IL 25 million to a net profit (before monetary gains) of IL 49 million.

Monetary gains comprised a significant and increasing portion of the net profits. IL 47 million (Liras of 1977/8) or 21 percent of net profits increased in 1975/6 to IL 86 million or 64 percent in 1977/8. The real cost of financing could be assessed by subtracting monetary gains from the reported finance expense. The net finance expense reported by Rasco for 1977/8 was IL 15 million. This last figure is commonly used by financial analysts; obviously, it can be very misleading. The failure by analysts to consider monetary gains or losses as an indispensable part of the financial evaluation of corporations might have led to a consistent underevaluation of stocks, according to a recent study.[23]

The results of the GPLA of builders like Rasco might not fully reflect their economic performances. Such companies usually carry large investments in land, the value of which fluctuates over time at rates different from those of the GPL. The evaluation of management performance in these companies should take account also of the profitability of investment in land, that is, the holding gains (losses) on land.

The information needed to compute the holding gains or losses (appraisals, and so on) is not available in the financial reports, nor can it be approximated through the use of other publicly available information. The information needed for Rasco was based on appraisals made by independent and reputable appraisers and were part of the company's internal records.

Exhibit 4 indicates that the net holding gains or losses (the holding gains or losses minus the general inflation component) were sizable in all three years. In the first two years, net holding losses occurred, while in 1977/8, the investment in land produced net holding gains. Observe that when net holding gains on land are considered in measuring performance, 1977/8 appears as the best year with a profit of IL 330 million, 244 percent over the GPL-adjusted profit. Clearly, the adjustment procedure set forth by FASB No. 33, which was used here, is not necessarily the most meaningful in this particular case. Alternative procedures might have yielded somewhat different adjusted income figures. Recalling that the information received by shareholders

[23] Modigliani and Cohn, "Inflation."

was that the company had lost IL 25 million, one might realize the distortive effect of historical reports.

THE BEHAVIOR OF THE STOCK MARKET

Reaction of Investors

Rasco's financial affairs were constantly in the news during the period from September to November 1978, and the price of its shares exhibited sharp changes. On September 12, the company announced the results for the year ending March 31, 1978. The five months' delay in the release of the financial statements was caused in part by the discussions between management and the auditors on the adequacy and magnitude of the provision for future losses.

As exhibit 5 indicates, some information regarding the poor performance might have leaked to the market: the price of Rasco's shares dropped during the week preceding the announcement from 275 to the level of 236,[24] which constituted a decline of 14 percent (corresponding to an abnormal return of −14.5 percent[25]). The drop in price might have been even larger had the stock not been declared on September 11 as "sellers only," thus limiting the decline in price to 5 percent.[26] The sharp drop in price prior to the announcement raised some eyebrows at the Securities Authority (the Israeli counterpart of the SEC) which requested the exchange to investigate this development. The investigation revealed that institutional investors who had prior information were responsible for the decline.

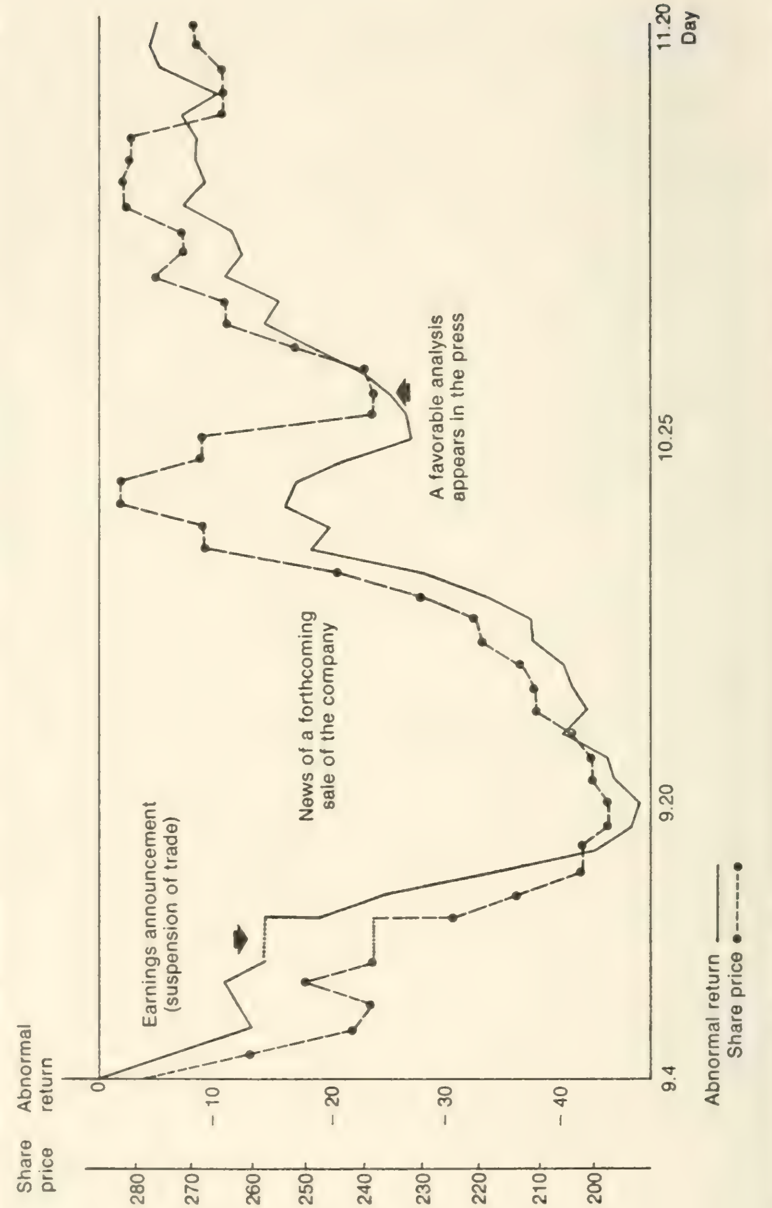
On the day of the announcement, the trade in the stock was suspended according to the normal procedures of the exchange. On the next day, the price of Rasco's shares began to decline; this was followed by three consecutive days of "sellers only." At the fourth day, a new equilibrium price of 202 was reached, 14.4 percent below the price on the day preceding the announcement (the magnitude of the

[24] The prices quoted on the TASE are in terms of percentage of par value.

[25] To compute the abnormal return, the return was adjusted for risk according to the systematic risk measure (beta) from the familiar market model. One year of weekly observations, preceding September 1978, was used to estimate the parameters of the market model. The intercept coefficient was found to be 0.007 and the beta coefficient 1.412.

[26] The trading mechanism of the TASE is as follows. Each security is traded once a day. Before the beginning of each trading day, orders are submitted. When there is an excess demand (supply), the price is raised (lowered) until the new sell (buy) orders from the presenting members of the exchange close the gap. All orders are executed at the new equilibrium price. If the price change required to reach an equilibrium is greater than 5 percent, no transactions are executed. The market for the stock is declared "buyers (or sellers) only" and the price is technically changed by 5 percent.

Exhibit 5.


Share price
Abnormal return
280
270
260
250
240
230
220
210
200
0
– 10
– 20
– 30
– 40
9.4
9.20
10.25
11.20
Day
Earnings announcement (suspension of trade)
News of a forthcoming sale of the company
A favorable analysis appears in the press
Abnormal return
Share price

negative abnormal return, due to the concurrent increase in the market index, was even greater, 29.2 percent). The volume of transaction was IL 490,000, nine times the average daily volume. The decline continued for one more day, and Rasco's shares reached a low of 196, representing a 29 percent decline over two weeks (an abnormal return of −46.3 percent).

Following the release of its financial statements, articles and reports concerning the Rasco Company appeared in most newspapers, with the loss figure of IL 25 million dominating the headlines. No reference was made by the financial columnists to the unique accounting measurement issues of the company, nor was there any attempt to adjust the reported figures for inflation. The articles also overlooked the steep increase in the market value of Rasco's land (by IL 300 million) which resulted from the upsurge in the demand for apartments toward the end of the fiscal year. In fact, the market value of the land increased at a much higher rate than that of the general price level. The accounting fixation could best be illustrated by the financial correspondent of a daily newspaper who openly wondered why Rasco had not sold some land to improve its profitability.

From September 20 to October 18, the price of Rasco's shares increased steadily and reached the level of 282. This increase was probably stimulated by published rumors that the majority stockholder, the Jewish Agency, was considering the sale of its shares.[27] Apparently, in case of sale, shareholders hoped to realize more than the current price from the sale of Rasco's shares. Indeed, the book value of Rasco adjusted for the current value of land only was at that time approximately 1,000. Palmon and Seidler describe a similar situation in the United States. Investment builders claimed for a long time that the price of their shares was depressed.[28] The release of current value information showing that the historical cost figures were substantially below the current value of the fixed assets did not affect the price. However, when one builder, Monumental Corporation, announced a plan by which its real estate holdings would be sold and the cash proceeds distributed to the shareholders, the shares jumped by more than 20 percent on the date of the announcement.

The rumors concerning Rasco's sale eventually subsided, and the price decreased to 238 on October 26. On October 29, a financial

[27] The Jewish Agency, a semigovernmental organization, has the majority of the voting shares of the Rasco Company. However, for all practical purposes, Rasco is managed as a profit-oriented enterprise.

[28] D. Palmon and L. Seidler, "Current Value Reporting of Real Estate Companies and a Possible Example of Market Inefficiency," *Accounting Review* (July 1978): 776-90.

analysis of Rasco prepared by one of the authors of this paper was published in the financial section of *Ha'aretz,* a leading Israeli daily newspaper. The weekly column in which the article appeared contains an analysis based on publicly available information concerning a company's recent financial statements one month after they are released. The contributors to the column are academicians in the fields of accounting and finance, as well as leading business analysts. Over the years, the column has earned an excellent reputation for its level of analysis.

The article on Rasco reviewed the accounting issues involved in the company's report and analyzed the effect of inflation on the reported results. No comprehensive adjustment for inflation was performed, but the indication was that the true performance of Rasco was probably much better than the reported loss of IL 25 million and that the book value adjusted for the current cost of land was four times higher than the market price of Rasco's shares.

The article had a positive effect on Rasco's shares which steadily increased for six days, until October 5 when they reached the level of 276 (an increase of 16 percent, or an abnormal return of 15.6 percent). The price of the share stayed at this level until the end of the year.

The reaction of the market to the publication of the analysis which utilized only publicly available information demonstrates the scarcity of good disseminators of financial information without whom an efficient market would not exist.

The quality of financial analysts in Israel was among the subjects examined in the previously cited study by Givoly and Lakonishok.[29] The results of the study might explain partially the stock market response to professional, although belated, analyses that appear in the press. Several questions in the study were designed to test indirectly the degree of knowledge and understanding of financial analysts in reading financial statements. Their observed performance was poor; for example, 43 percent of the senior analysts surveyed did not fully understand the effect of various inventory valuation methods on income, 65 percent did not understand the nature of the provision for deferred taxes, and 35 percent could not properly use a funds statement. An even more serious deficiency of Israeli analysts is their inability to cope with the inflationary effects on reported accounting numbers. As mentioned earlier, only 13 percent of the senior analysts seemed to have some understanding of the impact that inflation has on the historical financial statements.

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[29] Givoly and Lakonishok, "Israeli Stock Market."

Reaction by the Board of Directors

While the reaction of the media and the investing public could somehow be explained by the lack of information and knowledge, the response of the board of directors is a striking example of the elusive nature of accounting numbers and the failure of presumably sophisticated and knowledgeable investors to understand fully the message conveyed by financial reports.

When the extent of the expected loss for 1977/8 became clearer, the board of directors met; during several stormy meetings, the general manager came under attack from most of the board members for his "miserable performance." The manager's own analysis of the results did not convince the members who assigned much more weight to the respectable report of the auditors, a leading CPA firm in Israel.

In the meetings on September 29, the chairman of the board submitted his resignation and openly suggested that the general manager should have done the same. The manager refused, claiming that the company was making money, not losing. Nevertheless, strong pressures finally compelled him to resign on October 25.

The swift shuffle at the top was not motivated, to be sure, by the desire to appease furious stockholders. The concentration of ownership and the small degree of reliance on the stock market for new capital made the company insensitive to the needs of the small individual investors. This insensitivity is best reflected in the poor and erratic dividend record of the company. It is, therefore, safe to conclude that the board reaction to the financial statements stemmed from a sincere concern regarding the financial position of the firm.

The information used by the directors for their evaluation of past performance and the assessment of the present situation consisted of historical accounting data and some cost projections. Interviews with members of the board, the general managers, and the controller revealed that the board did not at any time consider or request inflation-adjusted accounting reports. The information routinely supplied to the board consisted of the following items: (1) the volume of new contracts and expected gross margins; (2) the number of new apartments sold; (3) the progress reports on projects (costs, collections, time schedule); (4) the payroll and level of employment and utilization of the labor force; (5) the working papers on new projects (feasibility and profitability evaluation); and (6) twice yearly, the recent annual, or the unaudited semiannual report, accompanied by pro forma statements (for the following six or twelve months). No attempt was made to adjust the historical information to inflation, nor was a request even submitted for adjusted data. The board's analysis must have therefore

been based on incomplete information leading inevitably to economically unsound decisions.

SUMMARY AND CONCLUSIONS

The financial statements of the Rasco Company illustrate the problems in evaluating the performance of companies having a long production cycle by the use of historical accounting information.

The study closely examined the accounting issues involved in the income measurement of a construction company, particularly the area of income recognition. It was argued and demonstrated by use of data regarding the Rasco Company that the percentage-of-completion method provides a much more relevant series of earnings than does the completed-contract method. Indeed, when estimates of future costs are difficult to obtain, the completed-contract method produces more verifiable numbers. The usefulness of these numbers to investors, however, is very doubtful since the stream of reported earnings is not then correlated with changes in business conditions in which the firm operates. Nevertheless, the only criterion offered by the accounting pronouncements for selecting the method of income recognition is the reliability of estimates. While the principles of objectivity and verifiability are deeply rooted in accounting practice and theory, the relevance of financial reports remains, unfortunately, an abstract and practically noncommitting goal.

Inflation tends to reduce the usefulness of financial reports to investors. In certain cases, the reported earnings convey a completely distorted description of the economic performance of the company. The Rasco example represents such a case. The combined effect of a high rate of inflation, long production cycle, and application of the completed-work method for income recognition produced for Rasco income numbers that grossly misrepresented its true performance. A comprehensive adjustment of Rasco's financial statements in the last three years revealed that the reported income consistently understated the real income and that during 1977/8, a year for which a considerable loss was reported, the company was in fact profitable. It was further shown that less comprehensive procedures for neutralizing the inflation effect, as well as partial disclosure of current cost information, might lead to erroneous conclusions. Widely used historical ratios such as Price/Earnings or Debt/Equity thus cannot serve in times of inflation as measures of performance and as a basis for a comparison between alternative investments.

When current cost information on land was incorporated into the adjustment, the performance measures changed significantly. In gen-

eral, the degree of divergence between different price indices (for example, between the general price index and the construction cost index) is positively correlated with the rate of inflation.[30]

The reaction of the stock market to the release of the Rasco Company's financial statements for 1977/8 and to the developments that followed revealed information concerning the sophistication of investors, the quality of financial analysts, and the efficiency of the market. The implications of the findings extend beyond the Israeli stock market and the particular scenario described in the study.

An investigation into the nature of accounting methods used by the Rasco Company, coupled with an adjustment of its statements to changing prices, would have revealed that the reported loss represented in fact a profit, and even a large one if the sharp increase (above the increase in the general price level) in the value of land was accounted for. Nevertheless, all of the reports in the news and most analyses referred almost exclusively to the IL 25 million loss as a measure of the company's success. No recognition was given to the effect of the accounting practices on the reported income, nor were there attempts to adjust the results for the high rate of inflation.

Both common investors and the more informed and presumably more sophisticated members of the board of directors fell victim to the elusiveness of accounting numbers. The board, reading the statements in the same simplistic manner as did the investors, concluded that management had performed particularly poorly and required (and received) the resignation of the general manager. It was not until the publication of a financial analysis in a newspaper, several weeks after the release of the annual announcement, that the market became aware of the impact that the particular accounting methods and inflation had had on the reported results. The analysis did not contain any new information, yet the reaction of the market to its publication was significant. Foster reports a similar phenomenon in the United States[31]: Brillof's article on the accounting policies of selected companies relied exclusively on publicly available information. Still, their publication stirred strong (needless to say, adverse) stock market reaction.

These and other findings appear to be inconsistent with the supposition that market participants are sophisticated and that, as a

[30] For evidence, see D. Vinning and T. Elwertowski, "The Relationship between Relative Prices and the General Price Level," *American Economic Review* (September 1976): 699-708.

[31] G. Foster, "Briloff and the Capital Market," *Journal of Accounting Research* (In press).

result, accounting regulatory bodies should concentrate on proper disclosure rather than on measurement issues.

Of special interest is the question concerning adequacy of adjustments for inflation made by the users of the reports. It was found that investors were incapable of a proper adjustment; lack of sufficient data was only one explanation. Another explanation was the insufficient awareness of investors and analysts of the exact impact that inflation had on the historical accounting reports. This last finding, which is confirmed also by a questionnaire-type study,[32] is quite surprising given the many ways in which adaption of Israeli investors to inflation is manifested. It seems, therefore, that historical accounting numbers raise some difficulties of interpretation even for investors who have long been accustomed to inflation.

The failure of analysts to evaluate properly the performance of some companies could also be traced to their limited resources. Given the great number of securities traded on the various exchanges, it is inevitable that some of them would generate only limited analytical and research activity. More than 10,000 companies have securities registered with the SEC. One of the interesting findings of the SEC Committee on Corporate Disclosure[33] is that 57 percent of the New York City brokerage houses follow closely only about 100 or fewer stocks, and only 21 percent follow more than 300. The comparative percentages for regional brokers are 83 percent and 6 percent, respectively. Given the strong overlapping between interests of different analysts (a result of the concentration on widely traded securities), many stocks are left with little or no fundamental analysis. There are strong indications and some direct evidence (including the findings of this study) that the usual fundamental analysis often fails to discern the effect of accounting policies and inflation on the reported results. Beaver's statement that accountants "should not be held responsible for using a 'wrong' method as long as they disclose the method that was used and sufficient data to permit adjustment to the non-reported method"[34] is therefore a voice of confidence in investors and financial analysts which might not be shared by all. For the many securities which are not the focus of analysts' research, the statement is seemingly wrong.

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[32] Givoly and Lakonishok, "Israeli Stock Market."

[33] Securities and Exchange Commission, *Corporate Disclosure.*

[34] William Beaver, "What Should Be the FASB's Objectives?" *Journal of Accountancy* (August 1973): 49-56.

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An Evaluation of Accounting for Construction Contracts: An International Comparison

KEN T. TROTMAN*

The recognition of profit from construction contracts[1] causes particular problems because construction contracts extend over more than one accounting period. The two methods most commonly used to record profit from construction contracts are the percentage-of-completion method and the completed-contract method. The percentage-of-completion method recognizes profit in proportion to progress on a contract for each period in which construction occurs. The completed-contract method recognizes profit only after all work on the contract is complete (minor costs which may occur at the end of a contract may be ignored when deciding whether a contract is complete). Although both methods are in accordance with recognized accounting principles, their respective effects on a company's reported financial position and operating results can vary greatly.

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[1] This paper has adopted the definition of a "construction contract" used by the International Accounting Standard Committee in IAS 11, that is, "A contract for the construction of an asset or a combination of assets which together contribute a single project. Examples of activity covered by such contracts include the construction of bridges, dams, ships, buildings and complex pieces of equipment. The feature which characterizes a construction contract dealt with in this statement is the fact that the date at which the contract activity is entered into and the date when the contract activity is completed fall into different accounting periods."

This paper reports that there is considerable diversity in accounting for construction contracts among Australia, Canada, the United Kingdom, and the United States. An examination of International Accounting Standard 11 (IAS 11) indicates that the standard is of limited use in dealing with the present problem. Given the existing historical cost framework and the emphasis placed on profit measurement, this author believes that the alternatives in accounting for construction contracts can be, and should be, reduced by accounting policymakers.

PRESENT ACCOUNTING PRACTICE

Australia

At present, there is no Australian standard which covers accounting for construction contracts. However, this topic is presently on the agenda of the Australian Accounting Research Foundation. A survey of the 1978 annual reports of fifty Australian companies involved with long-term construction contracts[2] provides the following information:

Method disclosed	*Number of companies*
Percentage of completion	16
Completed contract	7
Percentage of completion or completed contract depending on the circumstances	5
Other methods	7
Unable to classify	6
Not given	9
	50

Many of the companies disclosing the use of the percentage-of-completion method have a policy that no profits should be recognized on a contract until it has reached a given percentage of completion. This policy exists as a result of the uncertainty inherent in estimating costs to complete projects, especially during the early stages of the work on the contract. The higher the minimum percentage becomes, the closer this method comes to the completed-contract method. Companies using more than one method divided contracts on the basis of the type of work to be performed, the size of the contracts, or on the basis of the type of contract. The "other methods" category primarily

[2] K. T. Trotman, *Accounting for Long-Term Construction Contracts* (Melbourne: Australian Accounting Research Foundation, 1980), p. 5.

represents companies disclosing that profit was recognized on the basis of management assessment. Often these companies emphasized conservatism in their disclosures. The main problem that arises is whether management should change its degree of conservatism depending on whether the company has had a good or bad year financially. Some examples of these disclosures are as follows:

> Work in progress and/or overclaims have been brought to account as a result of management assessment of each individual contract.
>
> ...when a contract is in advanced stages of completion the estimated contract value completed has been taken to the credit of sales account and a conservative estimate of the profits earned or loss incurred to date brought to account....
>
> ...jobs nearing completion were valued as follows: not more than two thirds of the estimated profit earned to 30th June 1978, has been brought to account.

A number of other disclosures were too vague to be classified, such as "on an emerging basis," and "progressively brought to account."

The major criticism of present Australian practice in accounting for construction contracts is that in many cases, profit determination becomes a matter of judgment. Practices, such as variation of minimum percentage completion requirements from project to project and recognition of less than the full profit figure calculated under the percentage-of-completion method,[3] provide the opportunity for profit to be increased or decreased at management's discretion.

Canada

There are no recommendations in the Canadian Institute of Chartered Accountants' Handbook on accounting for construction contracts, but paragraph 1505.10 does mention recognition of profit on long-term construction contracts as an example of items requiring disclosure of accounting policies.

A survey of financial reporting in Canada[4] includes the accounting methods of surveyed companies which referred to construction contracts. The results are shown here.

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[3] For example, if a project is 50 percent complete, management may decide to recognize only 30 percent of the total expected profit on the project instead of 50 percent. Some companies treat the percentage of completion as setting the maximum profit that can be taken, but the actual amount to be recognized can be less if management considers it more appropriate because of the degree of risk involved.

[4] Canadian Institute of Chartered Accountants, *Financial Reporting in Canada,* 13th ed. (Toronto: CICA, 1979), pp. 104-5.

Methods	*Number of companies*	
	1978	1977
Percentage of completion	18	17
Completed contract	8	8
Both percentage of completion and completed contract	4	6
Method not determinable	3	2
	33	33

United Kingdom

The position in the United Kingdom is given in Statement of Standard Accounting Practice (SSAP) No. 9, "Stocks and Work in Progress" which suggests that because of the length of time taken to complete long-term contracts, deferring the recognition of profit until completion may not give a fair view of the company's operations during the year. The statement suggests that

> where the business carries out contracts and it is considered that their outcome can be assessed with reasonable certainty before their conclusion, then the attributable profit[5] should be taken up, but the judgement involved should be exercised with prudence.

Furthermore, when the outcome cannot reasonably be assessed before the conclusion of the contract, no profit should be shown. However, SSAP No. 9 does not define or provide examples of "reasonable certainty."

A survey of U.K. published accounts[6] provides the following information:

	Number of companies	
	1978-79	1977-78
Profit on uncompleted contracts		
Included	61	60
Excluded	1	4
Not mentioned	7	9
	69	73

This survey notes, however, that in many cases, profits were included on certain contracts only, often defined as those nearing completion. This suggests that U.K. companies are not using a strict percentage-

[5] Attributable profit is defined in SSAP No. 9 as that part of the total profit currently estimated to arise over the duration of the contract which fairly reflects the profit attributable to that part of the work performed at the accounting date.

[6] Institute of Chartered Accountants in England and Wales, *Survey of Published Accounts 1979* (London: ICAEW, 1980), p. 141.

of-completion method but are in fact using considerable discretion in deciding when profits are to be recognized. This discretion can also be seen from the accounting policy notes of a number of U.K. companies concerned with construction contracts. For example,

> Profit is taken as work progresses. Unless a more conservative approach is considered necessary, the percentage margin on each individual contract is the lower of margin earned to date and that forecast at completion taking into account agreed claims. . . .[7]
>
> Attributable profit is included when the outcome of a contract can be assessed with reasonable certainty.[8]

In addition, a number of the companies that included profit on uncompleted contracts state that only profits earned have been included. They do not state, however, what method was used to decide whether profits have been earned. For example, ". . . work in progress has been valued at cost including direct and indirect overheads with an addition for only such profits as have been earned less payments to account."[9]

United States

The position in the United States is given in Accounting Research Bulletin (ARB) No. 45[10] which states that:

> . . . in general when estimates of costs to complete and extent of progress toward completion of long-term contracts are reasonably dependable, the percentage of completion method is preferable. When lack of dependable estimates or inherent hazards cause forecasts to be doubtful, the completed contract method is preferable.

It has been suggested that:

> . . . since ARB No. 45 was published in 1955, companies have increasingly been expected to use the percentage of completion method because growing sophistication of management and better information systems have increased management's ability to plan and manage long-term projects. Inability to prepare dependable estimates of cost to complete contracts is therefore increasingly considered substandard practice. Even if "inherent hazards" of contracts or other factors beyond management control make recognizing income imprudent until contracts are completed, management is expected to prepare and use estimates of cost to complete to evaluate, among other items, the possibility of loss on contract. . . .[11]

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[7] BICC Limited, 1978 Annual Report.

[8] Tilbury Contracting Group Ltd., 1979 Annual Report.

[9] Aberdeen Construction Group Limited, 1979 Annual Report.

[10] American Institute of Certified Public Accountants, "Long-Term Construction-Type Contracts," *Accounting Research Bulletin, No. 45* (New York: AICPA, 1955).

[11] P. L. Defliese, K. P. Johnson, and R. K. Macleod, *Montgomery's Auditing* (New York: Ronald Press, 1977), p. 222.

Accounting Series Release No. 164 issued in November 1974 by the United States Securities and Exchange Commission specifies additional disclosures for long-term construction contracts including "the nature of costs accumulated in inventories, the effect of cost accumulation policies on cost of sales, and the effect of revenue recognition practices on receivables and inventories."

A survey by Freeman of forty-three companies with long-term contracts indicates that thirty-two used the percentage-of-completion method, eight used the completed-contract method, and three used both methods.[12] Freeman states that on cost-plus type contracts, most companies using percentage of completion made the additional comment "when revenue is assured." He also mentions that some companies used the word "generally" meaning that "sometimes the completed contract method was used which could represent an arbitrary inconsistency or the company may be unsure of the profitability of the contract."

A summary of accounting methods used by the companies in the *Accounting Trends and Techniques* survey[13] is shown here:

Method	*Number of companies*	
	1978	1977
Percentage of completion	86	75
Completed contract	10	14
Not determinable	4	8
	100	97

More recently, a committee of the American Institute of Certified Public Accountants has prepared an exposure draft on "Accounting for Performance of Construction-Type and Certain Production-Type Contracts"[14] which recognizes that both the percentage-of-completion and completed-contract methods are used and that both methods are frequently applied differently in similar circumstances. However, the statement suggests that the two methods should be used in specified circumstances and should not be used as acceptable alternatives under the same circumstances.

[12] R. J. Freeman, "Revenue Recognition and Disclosure on Long-Term Contracts," *Management Accounting* (January 1976): 44.

[13] American Institute of Certified Public Accounts, *Accounting Trends and Techniques* (New York: AICPA, 1979), p. 275.

[14] American Institute of Certified Public Accountants, Construction Guide Committee, *Proposed Statement of Position, Accounting for Performance of Construction-Type and Certain Production-Type Contracts* (New York: AICPA, 1979).

The exposure draft suggests that the percentage-of-completion method should be used provided reasonably dependable estimates can be made and the following conditions exist: (1) contracts specify clearly the rights of the parties, the considerations to be exchanged, and the manner and terms of settlement; (2) the buyer can be expected to satisfy his obligations under the contract; and (3) the contractor can be expected to perform the contractual obligations. The committee states that:

> ... for entities engaged on a continuing basis in the production and delivery of goods and services under contractual arrangements and for whom contracting represents a significant part of their operations, the presumption is that they have the ability to make estimates that are sufficiently dependable to justify the use of the percentage-of-completion method of accounting. Persuasive evidence to the contrary is necessary to overcome that presumption. The ability to produce reasonably dependable estimates is an essential element of the contracting business. . . .[15]

Three bases are provided for using the percentage-of-completion method:

1. Normally, a contractor will be able to estimate total contract revenue and total contract cost in single amounts.
2. For some contracts on which some level of profit is assured, a contractor may only be able to estimate total contract revenue and total contract cost in ranges of amounts.
3. When estimating the final outcome is impractical except to assure that no loss will be incurred, a contractor should use a zero estimate of profit. The difference between the percentage-of-completion method with a zero profit and the completed-contract method is that the revenue earned, together with an equal amount of related costs, are presented in the income statement rather than as deferred items in the balance sheet.

The committee further suggests that the completed-contract method should only be used (1) where an entity has mainly short-term contracts and the financial position and results of operations would not vary materially from those resulting from use of the percentage-of-completion method, and (2) in those rare circumstances in which estimates cannot meet the criteria for reasonable dependability or in which there are inherent hazards. Inherent hazards relate to those extraordinary contract conditions or external factors that raise questions about the ability of either the contractor or the customer to perform his obligations under the contract. Examples of such hazards in-

[15] Ibid., par. 24.

clude contracts whose validity is doubtful, contracts subject to the outcome of pending litigation or legislation, and contracts exposed to the possibility of the condemnation or expropriation of the resulting properties.

INTERNATIONAL ACCOUNTING STANDARD 11

The previous discussion has illustrated the wide diversity of methods used in recognizing profit from construction contracts in various countries. This diversity of methods affects comparability between companies and leaves considerable scope for management to use discretion. This discretion permits bias in financial reporting by giving management control over reported results.[16] The purpose of this section is to evaluate the extent to which IAS 11 may help in overcoming these problems.

Paragraph 42 of IAS 11 states that in accounting for construction contracts in financial statements, either the percentage-of-completion method or the completed-contract method should be used. Paragraph 43 of IAS 11 states that:

> The percentage of completion method may be used only if the outcome of the contract may be realiably estimated. In the case of fixed price contracts, this degree of reliability would be provided only if all the following conditions are satisfied:
> (a) total contract revenues to be received can be reliably estimated,
> (b) both the costs to complete the contract and the stage of contract performance completed at the reporting date can be reliably estimated, and
> (c) the costs attributable to the contract can be clearly identified so that actual experience can be compared with prior estimates.
>
> In the case of cost plus contracts, this degree of reliability would be provided only if both the following conditions are satisfied:
> (a) the costs attributable to the contract can be clearly identified and
> (b) costs other than those that will be specifically reimbursable under the contract can be reliably estimated.

The main deficiency of IAS 11 is that it allows the percentage-of-completion and completed-contract methods as alternative methods of accounting under similar sets of circumstances. Even when the conditions outlined in paragraph 43 are satisfied, companies are given a choice as to which method to use.

Paragraph 24 of IAS 11 recognizes that the application of the percentage-of-completion method is subject to the risk of error in making estimates. Paragraph 43 provides restrictions intended to overcome this problem. On the other hand, paragraph 28 states that the

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[16] For example, see G. J. Staubus, *Making Accounting Decisions* (Houston: Scholars Book Company, 1977).

principal disadvantage of the completed-contract method is that periodic reported income does not reflect the level of activity on contracts during the period. However, the standard does not set rules on additional information which should be disclosed in order to eliminate the stated disadvantage.

IAS 11 does not solve the problem of lack of comparability between companies in the same industry. APB Statement No. 4[17] states that achieving comparability between enterprises depends on accomplishing two difficult tasks: (1) identifying and describing the circumstances that justify or require the use of a particular accounting practice or method; and (2) eliminating the use of alternative practices under these circumstances. IAS 11 has achieved the first task but failed in the second.

Two other problems discussed here, namely the use of minimum completion requirements and recognition of less than the full profit figure calculated under the percentage-of-completion method, are not mentioned in IAS 11. Choice of the treatment of work in process is also allowed in IAS 11. Paragraph 40 states that progress payments and advances received from customers in respect to construction contracts should be shown either as a deduction from the amount of contract work in process or as a liability. Paragraph 41 states that progress payments due but not received should be either recognized in the financial statements as receivables or indicated by way of note.

Previous IAS standards have been criticized for being basically catalogues of those technical procedures on which representatives of different national accounting bodies could agree.[18] IAS 11 suffers from the same deficiencies. It is an exercise in compromise to accommodate alternative methods of treating the various aspects of construction contracts which are used in various member countries. This paper suggests that a more positive stand should be taken by reducing the variety of existing practice. Before considering any reduction in the alternatives, it is necessary to evaluate the percentage-of-completion and completed-contract methods. This evaluation is presented in the following section.

EVALUATION OF APPROACHES TO RECOGNIZING INCOME IN THE CONSTRUCTION INDUSTRY

In May of 1980, the Financial Accounting Standards Board (FASB)

[17] American Institute of Certified Public Accountants, "Objectives of Financial Accounting and Financial Statements," *APB Statement No. 4* (New York: AICPA, 1971).

[18] R. G. Walker, "International Accounting Compromises: The Case of Consolidation Accounting," *ABACUS* (December 1978): 109.

issued *Statement of Financial Accounting Concepts No. 2,* "Qualitative Characteristics of Accounting Information." It is one of a series of Statements of Financial Accounting Concepts intended to establish the objectives and concepts the FASB will use in developing standards of financial accounting and reporting.

To evaluate the various methods of recognizing income in the construction industry, there is a need to select some standard against which these methods can be assessed. The standard selected in this paper is the qualitative criteria established by the FASB. It is recognized that the choice of this framework is ultimately a value judgment. The choice is rationalized solely on the grounds that this is the framework certain policymakers propose to employ.[19]

The FASB provides a hierarchy of qualities as shown in exhibit 1. The board states that the primary qualities are relevance and reliability. If either of these qualities is completely missing, the information will not be useful. Comparability is a secondary quality that interacts with relevance and reliability to contribute to the usefulness of information.

Relevance

The FASB states that:

> . . . to be relevant to investors, creditors, and others for investment, credit, and similar decisions, accounting information must be capable of making a difference in a decision by helping users to form predictions about the outcomes of past, present, and future events or to confirm or correct expectations.[20]

However, as there are degrees of relevance, the question arises whether the percentage-of-completion or the completed-contract method determines the more relevant profit figure.

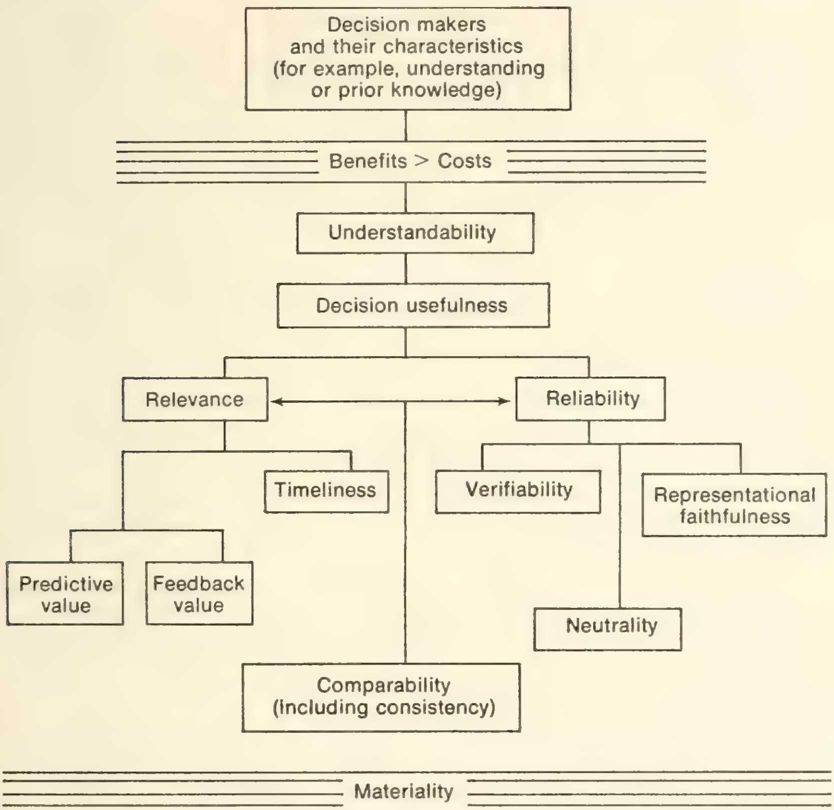
In *Statement of Financial Accounting Concepts No. 1,* the FASB states that:

> Financial reporting should provide information about an enterprise's financial performance during a period. Investors and creditors often use information about the past to help in assessing the prospects of an enterprise. Thus, although investment and credit decisions reflect investors' and creditors' expectations about future enterprise performance, those expectations are commonly based at least partly on evaluations of past enterprise performance.

[19] It is realized that there is some debate (e.g., see the works by Demski and Chambers in the Bibliography) as to whether there exists a single set of "qualitative criteria" that can specify uniquely a universally relevant financial accounting standard.

[20] Financial Accounting Standards Board, "Qualitative Characteristics of Accounting Information," *Statement of Financial Accounting Concepts No. 2* (Stamford, Conn.: FASB, 1980), par. 47.

Exhibit 1. A Hierarchy of Accounting Qualities



. . . the goal of accrual and deferral of benefits and sacrifices is to relate the accomplishments and the efforts so that reported earnings measure an enterprise's performance during a period . . . .[21]

The completed-contract method measures performance on the basis of what contracts were completed during the period regardless of how much contracting effort took place during that period and, therefore, does not reflect current performance when the period of the contract extends beyond one accounting period.

[21] Financial Accounting Standards Board, "Objectives of Financial Reporting by Business Enterprises," *Statement of Financial Accounting Concepts No. 1* (Stamford, Conn.: FASB, 1978), par. 42-45.

Reliability

The FASB states that:

> accounting information is reliable to the extent that users can depend on it to represent the economic conditions or events that it purports to represent .... reliability of accounting information stems from two characteristics that it is desirable to keep separate, representational faithfulness and verifiability ....[22]

To determine which method of measuring profit for construction contracts is the more reliable, it is necessary to determine which method is more verifiable and which is more representationally faithful.

Representational faithfulness refers to correspondence or agreement between a measure or description and the phenomenon it purports to represent. If profit is to be an indicator of current performance during a particular period, it would appear that the use of the percentage-of-completion method would be more representationally faithful because the completed-contract method only measures the performance of those contracts completed during the period, regardless of the level of economic activity of the firm during that period and does not report on the performance that is occurring under the enforceable rights of the contract as the work progresses.

Verification implies consensus among independent measurers using the same measurement methods. The more choices, estimates, and judgments in applying the measurement method adopted, the less chance there is of a "high degree of consensus among measurers." Using the percentage-of-completion method, estimates must be made of future costs to be incurred, percentage of completion, and, in some cases, total revenue to be received. There are many ways of estimating the percentage of completion: a cost basis, engineering basis, and billings received basis. The cost basis, which appears to be the most widely used, requires many further decisions, particularly regarding what costs to include. Claims and variations pose further problems in estimating future costs and revenues. The completed-contract method recognizes profit only when the contract is complete or substantially complete; therefore the main estimate under this method involves deciding what is "substantially complete." Thus, the completed-contract method would be more likely to give a higher degree of consensus among independent measurers than the percentage-of-completion method.

Staubus suggests that:

> a negative approach to reliability focuses on the potential for manipulation,

[22] FASB, "Qualitative Characteristics," par. 62.

poor judgements and errors in the application of accounting rules. The more possibilities we see for such defects, the less reliable we consider the results to be — since we usually are unable to ascertain, as the data are being used, whether such defects are, in fact, present.[23]

The potential for manipulation, poor judgment, and errors certainly exists under the percentage-of-completion method, but it should be noted that possibilities for manipulation under the completed-contract method also exist because of the lack of a suitable definition of what is "substantially complete" and also because management can move resources from one job to another to defer or accelerate completion, depending on the desired profit result.

Staubus suggests that one safeguard that can be used to decrease this lack of reliability is consistency.[24] However, this must mean not only consistency of method and policy but also consistency of interpretation of this policy. He gives the example of a company whose policy on accounting for research and development is to capitalize the costs of specific projects that are judged to have "a high probability of resulting in a profitable product." In this case, the accountant is given great freedom in deciding which projects to capitalize and in the interpretation of this policy from year to year. Similar freedom is given to the accountant in deciding the percentage of completion under a contract or when a contract is substantially complete. For these reasons, auditors should endeavor to ensure that this consistency does in fact exist.

If this consistency is maintained, the verifiability of the information increases, and reliability thus increases. For example, assume that a company uses the percentage-of-completion method and has a policy that (1) the percentage of completion is to be calculated using the cost basis, (2) costs to date are to exclude all materials not yet used on the job, (3) general and administrative costs are to be excluded from contract costs, (4) subcontractor costs should be adjusted to the extent that the timing of payments to subcontractors differs from the amount of work they have performed under the subcontract, and (5) for dredging contracts, no profit is recognized until the contract is, say, 20 percent complete. If this policy were adopted consistently, it would appear that the profit figure would become much more verifiable.

It should also be noted that reliability does not imply precision or certainty and that sometimes a range within which an estimate may fall will provide more reliable information than a single point estimate.

[23] Staubus, *Accounting Decisions,* p. 46.
[24] Ibid., pp. 46-47.

Providing probabilities attaching to the different values of an attribute may in some cases be the best way of providing reliable information concerning the measure of the attribute and the uncertainty that surrounds it.[25]

The United States Securities and Exchange Commission has considered the possible need for providing a range of outcomes for companies where the outcome of one or a very small number of projects will have a dominant effect in determining the company's success or failure. The commission suggests that:

> ... in such cases, disclosure of the sensitivity of results to estimates must be emphasized. This may be done on the face of the financial statements by modifying appropriate captions. Another possible approach to be considered in unusual circumstances is revising the basic format of conventional financial statements to reflect a range of outcomes. In addition, substantial footnote discussions of results, under alternative assumptions should be considered.[26]

This section attempted to appraise the alternative methods of recognizing income in the construction industry using certain criteria. On the basis of relevance, the percentage-of-completion method appears preferable. Reliability was defined in terms of representational faithfulness and verifiability. Based on the argument presented here, the percentage-of-completion method again appears to provide more representational faithfulness. In terms of verifiability, it was shown that under both methods, estimates must be made which can reduce the consensus among independent measurers. However, as these estimates are less extensive under the completed-contract method, it was suggested that this method was more verifiable.

The issue arises therefore as to what extent some verifiability and perhaps other qualities can be sacrificed to increase the relevance of information. Provided consistent policies are enforced by the auditing profession and adequate disclosure is made, the loss of verifiability that may arise from the use of the percentage-of-completion method is not likely to be significant.

CONCLUSIONS

This paper has presented the diversity of methods used in recognizing profit from construction contracts and the substantial discretion provided to management in this area. IAS 11 fails to overcome these problems since it allows either the percentage-of-completion method or the completed-contract method to be used without showing a preference

[25] FASB, "Qualitative Characteristics," par. 72.

[26] Securities and Exchange Commission, *Accounting Series Release No. 164* (Washington, D.C.: Government Printing Office, 1974).

for either. ARB No. 45 suggests that the percentage-of-completion method is preferable, provided reasonably dependable estimates can be made. However, "reasonably dependable" is not defined. SSAP No. 9 suggests that, provided the outcome can be assessed with "reasonable certainty" before completion, attributable profit should be used. However, SSAP No. 9 fails to define "reasonable certainty" and the term "attributable profit" allows many hybrid methods to be used instead of a strict percentage-of-completion method.

As discussed in this paper, there is a good case for taking a more positive stand in reducing the variety of existing practice. Using the FASB's qualitative criteria, this author suggests that the percentage-of-completion method is preferable in most circumstances on the grounds of relevance and representational faithfulness. Suggestions were made for overcoming the problem of verifiability with this method.

It is therefore recommended that any future standard for construction contracts should define the conditions that should exist before the percentage-of-completion method can be used. If these conditions are met, the percentage-of-completion method should be mandatory. If the conditions cannot be satisfied, companies should use the completed-contract method and provide further information by way of note including details on the level of contract activities for the period and the uncertainty present which prevented use of the percentage-of-completion method.

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[1] William A. Dymsza, <u>Multinational Business Strategy</u> (New York: McGraw-Hill, 1972), pp. 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," <u>Accountancy</u> (March 1972): 4-8.

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Contents

Accounting in Russia: The European Connection

DEREK T. BAILEY*

PRELIMINARY OBSERVATIONS

The *Collins English Dictionary* provides the following definitions for the term "Russia": another name for the Russian Empire, another name for the Soviet Union, and another name for the Russian Soviet Federated Socialist Republic. In any of these senses, "Russia"[1] signifies a much greater geographical area than European Russia which itself is larger than Old Russia, the forest region in which during the 9th to 11th centuries the eastward migrating Russian people settled. Old Russia may be said to be contained in an area east of a north-south line connecting Pskov, Vilna, and Golich and northwest of a line linking Kiev, Kharkov, and Nizhni-Novgorod (now Gorkii).[2] Southeast of this area lived many people of Asiatic origin, swept in on the high tide of the Mongolian conquest. Unlike other major European peoples (with the exception of the Spanish who have been influenced by their Islamic inheritance), an influx of Asiatic elements has contributed to the molding of the character and consciousness of the Russian people.

* Derek T. Bailey is a lecturer, Department of Accounting, at the University of Birmingham, England.

This is a revised and expanded version of a paper originally presented at the Third Congress of the European Accounting Association, Amsterdam, the Netherlands, 24-26 March 1980.

[1] It was recognized as larger than European Russia after the October Revolution. Thus, "it is a curious fact that owing to the internal re-organisation of Soviet Russia there is no longer any actual political frontier to 'Europe' as a Continent, between the Caspian Sea and the Arctic Ocean for Russia's political subdivisions . . . lie astride the old boundary." *The New Pictorial Atlas of the World* (London: Oldhams, 1938), p. ix.

[2] The imaginary boundary between Europe and Asia was located on the River Dnieper in the 13th century, moved to the mouth of the River Don in the 16th century, and later still, further east.

Russia, as a political entity, may be regarded as an Euro-Asian amalgam, in which dominance has oscillated between the European and non-European constituents. The European element was dominant, was the totality of Russia, until the Russian principalities were overwhelmed by the forces of, and absorbed into, the Mongolian Empire. In acknowledgement of their subjugation, the Russian princes during the period 1236-1480 paid tribute to the Tartars of the Golden Horde.[3] Muscovy (the state with which the Russian principalities had been merged) freed itself from domination of the Tartars as their political and military power receded. Later, from 1571 until about 1696, Muscovy paid tribute to the Tartar khans of the Crimea.[4] Subsequently, the European element became, and remained, dominant. However, in recent decades, with the industrialization of Kazahkstan in Central Asia and the contrasting demographic changes occurring among the diverse components of the Soviet population, the pendulum of dominant influence appears poised as if ready to swing back to the non-European constituent, and that would be but a parallel to the slowly changing relationship between the European and non-European nations of the world community.

During the era of the Tartar yoke, and subsequently, there were unions (voluntary and otherwise — marriageable daughters comprised part of the tribute exacted by the Tartars) between the forest-dwelling Russians and the Asiatic peoples living on the Steppe. With the decline of the Tartar power in the 15th century, some Tartar chieftains entered the service of Muscovy, as did about 130 families of the Tartar upper class, becoming Christians and being assimilated into the Russian nobility (including such names as Apraksin, Naryshkin, Saburov, Turgenev, and Uvarov).[5] Tsar Boris Godunov (1598-1605) was descended from a Mongolian family. Russian culture has been impregnated with non-European influences. Thus, the source of Russian iconography, adopted from Byzantium, has been attributed to the Arabic art of Hatra (situated in present-day Iraq).

Not all Russian social classes absorbed European and Asian influences in equal measure. Throughout the centuries, the merchant class was influenced by Asian modes of behavior in its domestic and business practices. Chinese methods of state financial control were introduced

[3] The Mongols unified the Turco-Tartar population of Central Asia and led them in the onslaught on Russia. Later the Mongolian Empire disintegrated into a number of Tartar khanates.

[4] R. Wittram, *Russia and Europe* (London: Thames & Hudson, 1973), pp. 42-43.

[5] Ibid., pp. 22-23.

by the Tartar overlords[6] and were later adopted by the princes of Muscovy.

Initially, the Russian autocracy was modeled on the oriental despotism of the Tartars. The need to defend vulnerable frontiers, and to acquire from the population the resources to do so, impelled Russia into absolutism. In a period of unbridled terror during the latter part of the reign of Ivan IV (1547-1564), the power of the boyars was destroyed and in their place a service class, serving and subservient to the tsar, was created and "from which, in direct line of succession, descend the dvorianstvo of imperial Russia and the communist apparatus of Soviet Russia."[7] Later, with the rise of Prussia, there was a tendency for the Russian tsars to copy developments in that country. "Frederick the Great amazed everybody in his 'total wars' by mobilizing almost one third of the economic resources of his poor and backward Prussia for war purposes."[8] The administration of economic resources in the German state during World War I was much admired by European socialists and dubbed "war socialism." Later, it was adapted to Russian conditions as "war communism." From a purely European perspective, Russia may be regarded as the sole remaining inheritor of the authoritarian principle of Frederick the Great — marshaling the resources of the country for the realization of relatively limited objectives. Within this setting, accounting was transformed into a tool of state economic administration.

PRE-PETRINE RUSSIA AND ACCOUNTING

In its early history, Russia was an integral part of the European community of nations. Kievan Russia, existing from 882 to 1169, and Novgordian Russia straddled the overland trade route traversed by Norse warriors and merchants journeying from Scandinavia and Baghdad. The first Russian towns arose (from the 9th century A.D.) as commercial centers on the international trade routes linking Scandinavia to Byzantium and Baghdad. Their social structure, institutions, laws, and religious beliefs evolved similarly to those of the towns that later developed elsewhere in Continental Europe. Urban civilization and commerce in Kievan Russia were more advanced than in con-

[6] G. Vernadsky, *The Mongols and Russia* (New Haven, Conn.: Yale University Press, 1953).

[7] R. Pipes, *Russia under the Old Regime* (London: Weidenfeld and Nicolson, 1974), p. 97.

[8] P. Drucker, *Big Business* (London: Heineman, 1947), p. 293, quoting the German historian Delbrueck.

temporary Western Europe, and there was a money economy and a well-developed commercial law.[9] External trade occupied an important place in the economy of Kievan Russia. Trade flowed north to the Baltic Sea and the Scandinavian lands, south to the Black Sea and the Byzantine Empire, and southeast to the Caspian Sea and the Caliphate of Baghdad. Russian merchants, both Kievan and Novgordian, entered into partnerships, were organized into associations or guilds, and exerted political influence. "Financial transactions and commercial activity enjoyed a high degree of development"[10] among the traders of Kievan Russia. In the south, Kiev traded principally with Byzantium, and the strength of these commercial ties led to the adoption of the latter's business practices by the Kievan merchants. Credit and investment techniques were borrowed from Byzantium.[11] The business practices of the Russian traders were comparable to those employed by their contemporary counterparts in Western Europe.

However, in 1204, Byzantium was subdued by the Fourth (Venetian) Crusade, and in 1240, Kiev succumbed to the Tartars so that the commercial ties between the two centers were destroyed totally. In the north, Novgorod and its sister city of Pskov were members of the Hanseatic League. Peterhof, the trading station of the Hansa in Novgorod, was a major center of the German merchants and comparable in importance to the Stalhof in London. Unlike their Italian counterparts, the north German merchants of the Hanseatic League were monopolistic and exclusive in outlook, averse to banking, and permeated by a traditional spirit[12] of business enterprise. Further, the Hanseatic accounting records were inferior to the Italian double-entry bookkeeping and limited to maintaining merely a record of outstanding claims and providing a basis for the settlement of accounts. However, in 1478-1479, Novgorod was subjugated by Muscovy, and in 1494, the Hansa trading station was closed. The Hanseatic accounting practices were not adopted by the Russian merchants.

When Russia was overwhelmed by the Mongols and Tartars, there ensued a period of economic recession lasting one and a half centuries.

[9] G. Vernadsky, *Kievan Russia* (New Haven, Conn.: Yale University Press, 1948), pp. 116-23.

[10] N. V. Riasanovsky, *A History of Russia* (New York: Oxford University Press, 1977), p. 52.

[11] M. C. Wren, *Course of Russian History* (London: Macmillan, 1967).

[12] The Dutch lost their predominance in trade with Russia because of their insistence on wanting to pay for goods "in textile products, fabrics and herrings," whereas the English merchants were willing to settle their transactions in foreign money. F. Braudel, *Capitalism and Material Life, 1400-1800* (London: Weidenfeld and Nicolson, 1973).

To the Norsemen, Russia had been known as "the land of towns," but in the face of the Tartar onslaught, the number of towns dropped by two-thirds. By the time Russia emerged from this period of prolonged economic stagnation toward the close of the 16th century, Western Europe had experienced considerable economic and social progress and was poised for a period of dramatic development. Compared with Western Europe, Russia was now alien, barbarous, and backward. "Russia experienced no Renaissance and no Reformation, and it took no part in the maritime discoveries and the scientific and technological advances of the early modern period."[13]

Following an extensive study, J. Needham has concluded that around the year 1500, there was "not much to choose between China and Western Europe in the achievements of science and technology."[14] Only in Western Europe did the Renaissance, the Reformation, and the rise of mercantile capitalism occur. Natural science became linked to the advances in mathematics to bring about the scientific revolution, the transformation in man's perception of the universe.

> The reduction of all quality to quantities, the affirmation of mathematical reality behind all appearances, the proclaiming of a space and time uniform throughout all the universe, was it not analogous to the merchants' standard of value?[15]

Jewels, silks, commodities — all were expressed in monetary terms. He suggested that it was not by accident that a mathematician wrote the first treatise on double-entry bookkeeping, or an engineer-mathematician wrote a book on the application of accounting to public administration, or Galileo wrote on monetary reform. Rather, it was because trade and commerce were "in the air."[16]

In the sea-washed lands of Western Europe, man's geographical, intellectual, and spiritual horizons were expanding. The revolt of reason against the Catholic Church's conception of a stochastic universe was urged forward by the necessity to solve practical problems (for example, of sea navigation). The merchants were innovative in the creation of new business techniques and in the search for new opportunities for making profits. Traditional attitudes and traditional methods were being overthrown not merely by the new spirit of scientific inquiry but also by the new spirit of business enterprise. The emergence of the

[13] Riasanovsky, *Russia*, p. 229.
[14] C. H. Ronan, *The Shorter Science and Civilization in China*, vol. 2 (London: Cambridge University Press, 1981), p. 65.
[15] Ibid.
[16] Ibid., pp. 65-66.

capitalist spirit, of entrepreneurial action preceded the perception of, in the words of Marx, "bookkeeping as the control and ideal synthesis of the process"[17] of the production of commodities.

"Apparently, mercantile culture alone was able to do what agrarian bureaucratic civilizations could not"[18] do in China. Neither could it be done in Russia.

There was an additional factor of major importance. The origin of capitalism is connected with the elements in society encouraging the accumulation of capital at the close of the medieval era.

> The emergence of a civil society, bürgerliche Gesellschaft i.e. an autonomous sphere of economic activity, unimpeded by political and religious restrictions. . . . Not only did this development justify morally the accumulation of property; it also separated the political sphere from the economic and gave rise to legal and institutional arrangements that made the primary accumulation of capital possible and socially acceptable. . . .[19]

Thus there was provided an environment conducive to the adoption of bookkeeping by men of business.

The Russian merchants of the 16th and 17th centuries were integrated into the structure of tsarist society through their participation in the financial administration for the collection of taxes. The leading merchants assumed responsibility for the collection of direct taxes and tolls and for the administration of the state tavern monopoly in each town. "In one way and another the merchants stood at the head of the basic financial apparatus in the towns."[20] The Russian merchant "rarely left his own country, used no sophisticated bookkeeping or financial techniques, and by the standards of Amsterdam or London was not a man of tremendous wealth."[21] On the other hand, he "was not so unique because most of the distinctive features of his economic activity were shared by the merchants of Prussia, Poland, and the Habsburg lands."[22]

Although Jacob Fugger (1459-1525) is reported to have learned double-entry bookkeeping in Venice,[23] there is no certain evidence that anything other than memoranda accounting records were maintained

[17] K. Marx, *Capital,* vol. 2 (Moscow: FLPH, 1957), p. 135.
[18] Ronan, *Civilization,* p. 66.
[19] S. Avineri, *The Social and Political Thought of Karl Marx* (London: Cambridge University Press, 1968), p. 155.
[20] P. Bushkovitch, *The Merchants of Moscow 1580-1650* (London: Cambridge University Press, 1980), p. 4.
[21] Ibid., p. 1.
[22] Ibid.
[23] J. Gies and F. Gies, *Merchants and the Moneyman, The Commercial Revolution, 1000-1500* (London: Barker, 1972), p. 275.

for the mining operations conducted in Slovakia and Silesia by his enterprises or for similar enterprises belonging to other merchants. There is no firm evidence that the leading merchants in Cracow, whether Italian, German, Polish, or Jewish, had adopted double-entry accounting at that time, although the "Moscow merchants probably had few sources of credit and more primitive bookkeeping techniques than were the rule elsewhere."[24]

Between 1500 and 1700, the Moscow merchants came to dominate Russian trade, and their prosperity grew, whereas in the latter part of the period, Poland, Slovakia, Hungary, and Bohemia were in economic decline. ". . . the Moscow merchants made their achievement in spite of their apparent ignorance of the bookkeeping techniques that were used in the West."[25]

The Russian merchants' activities were characterized by a traditional acceptance of inherited business practice, the dominance of traditional attitudes in business dealings. Consequently,

> the Russian government turned to foreign merchants for the construction of manufactories during the sixteenth and seventeenth centuries because pressing industrial demands (created above all by military needs) were not being met by existing productive forces.[26]

The foreigners were encouraged to establish manufacturing enterprises in Russia because their mastery of advanced technology (for example, in the manufacture of iron) was valued by the tsars, not their commercial skills. ". . . the state did not want those foreigners to infect Russians with ideas alien and uncongenial to the Russian tradition."[27] During the 16th and 17th centuries, both the Russian Orthodox Church and the tsar resisted the encroachment of European influences that threatened to erode the traditional Russian way of life. There were serious obstacles to the spread of European accounting practices among the Russian merchants.

> At Novgorod at the beginning of the 15th century, "they still only used . . . small Tartar coins, scraps of marten's skin, bits of stamped leather. They only began to mint very coarse silver money in 1425. And Novgorod was still in advance of the Russian economy, within which exchanges were made in kind for a long time." They only began to mint money regularly with the arrival of German coins and ingots . . . in the 16th century. And then only on a

[24] Bushkovitch, *Merchants,* p. 170.
[25] Ibid., p. 172.
[26] J. T. Fuhrman, *The Origins of Capitalism in Russia* (Chicago: Quadrangle, 1972), p. 8.
[27] Ibid., p. 236.

modest scale. . . . Barter continued and only receded with the reign of Peter the Great.[28]

By 1500, printing presses were to be found in every European country except Russia: there were over 1,700 printing presses in almost 300 European towns.[29] In Russia, the first printing press was not established until 1566, and it was destroyed then because of opposition from the Church.[30] ". . . not until the Church lost its monopoly over the press under Peter the Great did secular books in Russia begin to appear freely and in large quantity."[31]

Although paper was first brought to Russia during the first half of the 14th century, attempts to establish its manufacture in Russia during 16th and 17th centuries were unsuccessful and dependence upon foreign imports, principally for the tsarist government, continued.[32] During the 16th and 17th centuries, books of West European origin did enter Russia, but, seemingly, there was no book on the new art of double-entry bookkeeping.[33]

From the time when numbers of West European merchants began to appear in Russia, they were segregated in special districts of the towns, partly "in response to the Church's desire to keep European influence from the Russian people."[34] Thus, foreign merchants "were forced to live in an isolated suburb near Moscow, the nemetshaya sloboda,"[35] and so discourse with their Russian counterparts was restricted. Even in the 17th century, there was opposition to the use of Arabic numerals as an un-Christian contrivance.[36] Around 1660, a Serbian emigrant, Yury Krezhanich, complained that the Russian merchants did not learn even arithmetic.[37]

From his study, Fuhrman concluded that the cultural influence exerted on Russia during the 16th and 17th centuries by foreign entrepreneurs was uncertain.[38] Nevertheless, it must be remembered that neither the merchants of the Hanseatic League, nor those of the Muscovy Company, nor the representatives of the House of Fugger,[39]

[28] Braudel, *Capitalism*, p. 333.
[29] A. G. Smith, *Science and Society in the Sixteenth and Seventeenth Centuries* (London: Thames & Hudson, 1972), p. 62.
[30] Fuhrman, *Capitalism in Russia*, p. 239.
[31] Ibid.
[32] Ibid., p. 153 and p. 252.
[33] Ibid., p. 236 and p. 324.
[34] Ibid., p. 240.
[35] Wittram, *Russia and Europe*, p. 45.
[36] Fuhrman, *Capitalism in Russia*, p. 239.
[37] J. D. Clarkson, *A History of Russia* (London: Longmans, 1962), p. 206.
[38] Fuhrman, *Capitalism in Russia*, p. 241.
[39] The House of Fugger established commercial contacts with the Russians early in the 16th century Gies and Gies, *Merchants and Moneymen*, p. 281.

with any of whom the Russian merchants may have had business dealings, were using the sophisticated techniques of double-entry bookkeeping developed in Italy.

IMPERIAL RUSSIA AND DOUBLE-ENTRY ACCOUNTING

It is a part of accounting mythology that the origin and spread of double-entry accounting through the European countries is inseparably connected with the rise of capitalism. If true, it might have been reasonably expected that double-entry accounting would have evolved independently and spontaneously in the various centers of early capitalist development (in the Low Countries and Southern Germany as well as Italy) instead of arising in and spreading from just one center — Italy. Clearly one or more factors critical to the emergence of double-entry bookkeeping remain undetected. Moreover, there may be factors other than the rise of the spirit of capitalist enterprise (that is, the quest for profits) to explain, if not the evolution, at least the diffusion of double-entry accounting into various European countries (for example, the importance of the papacy as the center of the financial network embracing much of medieval Europe). Therefore, the myth should be treated with caution and not awarded the status of a scientific hypothesis. The myth, although plausible and ideologically attractive, remains untested. Certainly, the appearance of double-entry accounting in Russia fails to correspond with the popular myth. On the contrary, the introduction of double-entry accounting to Russia is connected with the "military revolution" with which the rise of absolute monarchies was associated during the 17th and 18th centuries.

The "military revolution" resulted in the development of highly trained standing armies of professional soldiers by the major European powers from about 1600, initially in Holland and Sweden and subsequently spreading elsewhere. For the most part developed as instruments of aggressive foreign policies, such armies were expensive to maintain. Centralized bureaucratic administrations (of which an outstanding example was provided by Prussia)[40] were developed for the collection and administration of the resources needed for the upkeep of the new armies. A corollary was the general acceptance throughout Europe of the view that "governments had a duty to manage and direct

[40] "The whole aim was to place the state's resources even more completely at the disposal of military needs. To this extent the whole administrative apparatus of the Prussian state can be viewed as an adjunct of military administration." W. Doyle, *The Old European Order 1660-1800* (London: Oxford University Press, 1978), p. 245.

economic life — to promote the state's wealth was to promote its power."[41] The standardization of uniforms, munitions, and equipment for the professional armies required a new level of large-scale production. "The earliest factories were established, not by private enterprise, but by states, to manufacture military supplies."[42]

These developments have been summarized as follows:

> Absolute monarchy arose out of the need for internal and external security which made a standing army as a royal monopoly essential. This army required higher revenues; the revenues required economic growth; they all required the formation of a royal bureaucracy. . . .[43]

And these developments made improvements in accounting control necessary,[44] initially in Western Europe but eventually extending to embrace Russia.[45] In the Dutch republic, Prince Maurice of Nassau (1569-1625), who was waging a war of independence against Spain, was dissatisfied with the state of financial administration of his royal estate and the army. Simon Stevin of Bruges proposed a system of double-entry accounting suitable for use in public administration. The proposals were accepted. The reorganization of the royal domains was followed in January 1604 by the introduction of double-entry accounting. In Sweden during the reign of Gustavus Adolphus (1611-1632), who waged a series of wars around the Baltic Sea, there was a reorganization of governmental administration and, from 1623, under the direction of the Dutch merchant Abraham Cabeljan, double-entry accounting was applied to the government accounts.[46] By 1704, double-

[41] Ibid., pp. 239-40.
[42] Ibid., p. 245.
[43] E. N. Williams, *The Ancient Regime in Europe: Government and Society in the Major States 1648-1789* (London: Bodley Head, 1970), p. 17.
[44] Thereby complying with the dictum of Karl Marx: the more economic activity approaches to the scale of society, the more essential becomes the task of accounting. Nor is the cited instance an isolated example. Thus, from around 1370, accounting control occupied an important place in the state administration of the maritime Venetian Republic. See F. C. Lane, *Venetian Ships and Shipbuilders of the Renaissance* (Baltimore: Johns Hopkins, 1934).
[45] W. Doyle indicated the relationship of the financial problem (of which the search for improved accounting methods was an aspect) to the general crisis of the Old European Order in the late 18th century: "Military preparedness in an age of ever-increasing technical sophistication and an ever-widening range of conflict made government more costly than ever before. This created a financial problem. In the search for new sources of revenue and better ways of organising the state to support the military machine, the problem became organisational. Because the necessary innovations could only occur through radical changes in laws and habits, it was also constitutional" (Doyle, *European Order,* p. 296).
[46] O. ten Have, "Simon Stevin of Bruges," in *Studies in the History of Accounting,* A. C. Littleton and B. S. Yamey (London: Sweet and Maxwell, 1956), pp. 234-56.

entry accounting had been adopted by the Swedish Pomeranian Camera.[47] Another West European innovator in accounting practice was Jean-Baptiste Colbert who, during 1661-1683, was the leading minister to the king of France. Among the posts he held were those of superintendent of commerce and comptroller of finances. He reorganized the finances of the country and "it was largely Colbert's work in finance that enabled Louis XIV to pay for the show and splendour of the most glorious part of his reign."[48] He promoted the use of double-entry accounting in state administration. Colbert fostered the development of commerce and industry, "for he held that the finances of the state depended on the taxes, and the taxes upon the amount of money in the country."[49] Colbert, however, was interested in the regulation, and not merely the promotion, of commerce and industry. In 1677, a royal edict ordered all merchants, craftsmen, and artisans to organize in guilds. In the same year, the Ordonnance de Commerce was promulgated requiring merchants, tradesmen, bankers, and money brokers to keep books of account.

> The regulations extended to the making of rules as to the books to be kept, forms to be observed in the making of entries, authentication by a public official as a means to the prevention of the crudest kind of falsification, the making of periodic inventories, and the preservation of correspondence.[50]

The regulations were designed to facilitate the exaction of taxes. The grandiose schemes of Peter I (1689-1725) for the modernization of Russia — the development of state-supervised enterprises, the construction of waterways, the creation of a war fleet and a new capital on the River Neva, and the waging of the Great Northern War (1700-1721) against Sweden and lesser wars against Turkey and Persia — imposed harsh financial burdens upon the country. In 1710, a financial crisis was encountered; there were no funds remaining with which to meet the anticipated annual financial deficit.[51] A pattern of events that had occurred earlier in Sweden, the Dutch Republic, and France was repeated in Petrine Russia. In Russia during the reign of Peter I, dissatisfaction with the old Muscovite system of administration and the

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[47] D. A. R. Forrester, *Schmalenbach and After* (Glasgow: Strathclyde Convergencies, 1977), p. 30.
[48] S. Clough and C. Cole, *Economic History of Europe* (Boston: Heath, 1952), p. 231.
[49] Ibid.
[50] S. E. Howard, "Public Rules for Private Accounting in France, 1673 and 1807," in *Significant Accounting Essays,* ed. Maurice Moonitz and A. C. Littleton (Englewood Cliffs, N.J.: Prentice-Hall, 1965), p. 15.
[51] Clarkson, *History of Russia,* p. 231.

recurring financial stringencies led to an attempt to gather information regarding the administrative structure of foreign countries (especially Sweden). In 1718-1720, the central administration was reorganized into ministerial colleges. The collegial form of government was borrowed from Sweden. Eventually, sixteen ministerial colleges were established, among the first being those for state revenue, state expenditure, and accounting control (reviziya or "the control of all receipts and expenditures"). It was at this time that a national budget was introduced (although not made public until the 1860s). A fourth ministerial college was the admiralty. The regulations (reglament) for the admiralty and fleet, issued on 5 April 1722, contained a section devoted to accounting matters.[52] There were instructions for record keeping in respect to persons, money, provisions, and other items and for recording receipts, issues, and the striking of balances. It was the first occasion on which the terms "debit," "credit," "balance," "balance sheet," and "bookkeeper," all borrowed from the German language, were used officially. The regulations specified the employment of two bookkeepers.[53]

According to the Soviet accounting historian Mazdorov, "The accounting reform introduced by Peter the Great on 5 April 1722 marked the repudiation of prikaznyi uchet,[54] laying the basis for the transition to West European forms of accounting."[55] The introduction of the double-entry method[56] and the compilation of a balance sheet "began in the Admiralty and then in the mining and metallurgical enterprises, especially in the Urals."[57] All these were state institutions and state enterprises. According to another Soviet writer, double-entry accounting was applied in the state mining and metallurgical enter-

[52] V. A. Mazdorov, *Istoriya razvitiya bukhgalterskogo ucheta v SSSR* (Moscow, 1972), p. 32.

[53] Ibid., p. 7 and p. 32.

[54] The Prkazy, as bureau of state administration, had arisen haphazardly out of the tsar's household. There were no clear distinctions between its administrative, judicial, and financial duties (Clarkson, *History of Russia,* p. 242) as was contrariwise the case for the state administrations of the German princes.

Prikaznyi uchet had similarly grown in a haphazard manner. There were "separate books for different kinds of state income and expenditure used by various groups of accounting clerks. The manner of accounting was complex, cumbersome, and intricate, being a form of accounting devised by the clerks who had no conception of an accounting system and had not seen one operating correctly." A. M. Galagan, *Schetovodstvo v ego istoricheskom razvitii* (Moscow, 1927), pp. 125-26.

[55] Mazdorov, *Istoriya,* p. 7.

[56] See Appendix.

[57] Mazdorov, *Istoriya.*

prises, then in the customs establishments and only later spread to trading enterprises.[58] The first Russian bookkeeper is reputed to have been one Timmerman,[59] who on 11 September 1732 was appointed chief bookkeeper to the St. Petersburg Customs Office by the ministerial college for commerce.[60] The concept of the account for grouping and recording accounting data under appropriate headings according to the nature of the transaction was introduced, thus supplementing the traditional chronological record. Also, account books ruled with separate columns for date, entry number, narration, and amount were employed. The memorial, or waste-book, journal, and ledger came into use, and it was now possible to prepare a balance sheet.[61]

Given the lack of trained accounting personnel, progress in the implementation of double-entry bookkeeping must be presumed to have been both slow and unsure. There was difficulty in applying improved accounting methods. Generally, accounting within the state administration remained disorderly and did not improve until the closing years of the 18th century.

By 1720, there were 191 factories (state owned or state supervised), mostly founded in the reign of Peter I and "all of them primarily designed to supply the Tsar's war materials."[62] Tsar Peter I "required the managers of all mining and smelting works to maintain certain records of their operations, thus laying the foundation for the collection of national economic statistics for this important industry."[63] Williams de Henin, an engineer managing a Urals mining and iron-making concern during 1722-34, wrote that the organization of accounting was to be entrusted to a steward. The accounting records were to include a journal, lists of the overseers' men, receipts, and issues books for the various material stocks (coal, ore, and so on). By each blast furnace, there was to be a wall-mounted blackboard for recording the charge and output, and every Saturday the primary data was to be further processed.[64] An instruction, dated 5 March 1766 and issued in furtherance of a decree promulgated the preceding year, dealt with the prob-

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[58] A. M. Sumtsov, *Kurs bukhgalterskogo ucheta* (Moscow, 1948), p. 23.

[59] F. Timmerman, friend and tutor to Peter I, in 1692 received a twenty-one year monopoly of the manufacture of sailcloth in Russia (Fuhrman, *Capitalism in Russia,* p. 159). It is not known whether Timmerman the sail maker and Timmerman the chief bookkeeper were the same person.

[60] Mazdorov, *Istoriya,* p. 7.

[61] Ibid., p. 7 and p. 9.

[62] Clarkson, *History of Russia.*

[63] P. Studenskii, *The Income of Nations* (New York: New York University Press, 1958), p. 82.

[64] Mazdorov, *Istoriya,* pp. 7-8.

lem of the ascertainment of the cost of output in conditions of serf labor. It was necessary to prepare schedules showing the quantities of materials and stores consumed, the amounts of ore and coal extracted and dressed separately for each mine and workplace, as well as the rate of pay and the clothing provided for the workpeople, and the price received for the output.[65]

The largest enterprise in the Urals was the Demidov,[66] founded in 1690 and within a century employing over 30,000 persons (wage laborers, assigned state peasants, and proprietory serfs) in more than fifty, mostly iron-making, establishments. By the end of the 18th century, the Demidov undertaking had acquired "an elaborate administrative apparatus" and "sophisticated accounting techniques."[67] "Since the time of Peter I Russia had been organised for war just as much as was Prussia."[68] Between 75 percent and 80 percent of the state revenue in Russia was channeled into war-related purposes. It was also in the context of the administrative requirements of the Russian state that double-entry accounting was introduced from Western Europe.

At the end of the eighteenth century, Russia was the world's leading producer of iron. The major export market was provided by Britain for whom the most important import from Russia was naval stores. By the end of the 16th century, the English fleet was supplied almost exclusively with Russian tackle,[69] and during most of the period 1763-1794, Great Britain imported more goods from Russia than from any other European country.[70] These trading contracts do not appear to have contributed to the spread of mercantile accounting among the Russian merchants. On the other hand, it may explain the prompt appearance in 1808 of Edward Jones' book, *The English System of Modern Accounting by Single and Double Entry,* published in 1796 at Bristol, England.[71]

The accounting practices of the Russian mining and iron-working enterprises[72] may have been influenced by the development of cameral

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[65] Ibid., p. 9.

[66] A portrait of Nikita Demidov by Tocque, a French painter who executed a number of portraits in Russia during the 1760s, once hung in the hall of Leeds Castle in Kent.

[67] W. L. Blackwell, *The Beginnings of Russian Industrialization 1800-1860* (Princeton, N.J.: Princeton University Press, 1969), pp. 22-23.

[68] Ibid., p. 298.

[69] Wittram, *Russia and Europe,* p. 38.

[70] P. Dukes, *October and the World* (London: Macmillan, 1979), p. 26.

[71] The book was reprinted in 1871 and 1913.

[72] "By the end of the 18th century state enterprises employed two-thirds of all industrial labour." See K. A. Wittfogel, "Russia and the East: A Comparison and Contrast," *Slavic Review,* vol. 22, no. 4 (1963): 640.

accounting in similar undertakings controlled by the German princes (for example, in Prussia and elsewhere). A form of cameral accounting had been applied in latifundia and state enterprises in Austria during the 16th and 17th centuries. However, it was not until 1762 that the first book, written by the Austrian M. Puechberg, was published. From 1770, cameral accounting was being taught at Vienna University and later began to be taught at other universities in the Austrian Empire: Budapest, Prague, and Lvov. Subsequently, cameral accounting was adopted for state administration in Germany and Austria.[73] In 1862, cameral accounting was adopted for provincial administration (in guberskaya kontrolnaya palata — provincial control chamber) in Russia.[74]

From the reign of Peter I, the rulers of Russia watched and were influenced by the innovations introduced by policy makers in Western Europe. In 1721, Peter I invited John Law to become financial adviser to the tsarist government and to introduce his "system" for the creation of a bank of issue into the Russian Empire.[75] The Regulations on Bankrupts issued on 15 December 1740 declared the compilation of a balance sheet to be obligatory for every "regular merchant." The regulations prescribed the keeping of the usual merchants' books "neatly, honestly, untorn and without alterations," and the closing of the books at the end of each year and the drafting of a balance sheet whenever it was desired to manage the affairs of an insolvent merchant.[76] The Russian regulations, unlike the Ordonnance de Commerce of Colbert, were couched in general terms and were expressive more of an aspiration than an obligation. In 1807, the Napoleonic Code de Commerce reiterated the rules for keeping books of account by men of commerce, and in 1832 in Russia, a law was introduced requiring merchants of the first guild[77] to maintain books of account.[78] Again, the means for their enforcement were lacking.

In the reign of Peter I, however, Russia was opened wide to European influences. The first Russian-language textbook on arithmetic was published in 1699 in Amsterdam.[79] The first Russian multiplication

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[73] Galagan, *Schetovodstvo,* pp. 163-64.
[74] Mazdorov, *Istoriya.*
[75] H. Montgomery Hyde, *John Law* (London: Allen, 1969), pp. 179-80.
[76] Mazdorov, *Istoriya,* p. 8.
[77] Under the Petrine reforms, the regular inhabitants of urban centers were divided into two guilds: an upper guild comprising bankers, merchants, professional men, and artists, and a lower guild comprising petty traders and artisans (Clarkson, *History of Russia,* p. 224).
[78] Mazdorov, *Istoriya,* p. 12 .
[79] Clarkson, *History of Russia,* p. 206.

table using Arabic numerals[80] was published in 1714, just twenty-two years after the publication of the first multiplication table.[81] The first printed book on bookkeeping appeared in 1736 in Russia.[82] It was entitled *On the Procedure for Keeping Income and Outlays and Accounts in Money and What Forms of Books to Maintain in Provinces, Villages and Towns.* During 1762-1763, there appeared in Moscow a Russian translation of *Amsterdam Trading,*[83] described by Mazdorov as the forerunner of the encyclopedia of commercial knowledge.[84] It was not until 1783 that the first instructional text on double-entry accounting appeared. It was a translation of Jan Ympryn's[85] celebrated work *Nieuwe Instructie.*[86]

The importance of the German influence on the development of accounting in Russia is indicated by some of the technical terms absorbed into the Russian language. Accounting texts published in French, Italian, and Dutch tended to be translated into German, and it was probably from the latter that Russian translations were made. The continental European classification of double-entry accounting systems into Italian, French, German, and American and British English was adopted. From the reign of Peter I, there was a tradition of foreign, especially German, nationals, either to escape persecution or to find outlets for their skills and abilities, settling in Russia and thereby contributing to the absorption of European accounting practices.

From the closing decades of the 18th century, the seepage of knowledge of West European developments into Russia is indicated by the books on accounting published. The first books to be published on double-entry bookkeeping were translations of books originally published in other countries. In 1795, Johann Stilliger of Riga, merchant and bookkeeper, issued a book on accounting.[87] It was written in German, then translated into Russian and published as *The Complete Guide to Double Entry or Merchants Accounts.* The book was the first

[80] Previously numerals had been represented by letters. A literal clockface is still to be seen in the ancient Russian town of Suzdal.
[81] Clarkson, *History of Russia,* p. 249.
[82] Mazdorov, *Istoriya,* p. 32.
[83] "In Russia the only foreign exchange rates known and quoted down to 1763 were those on Amsterdam." See S. Clough and C. Cole, *Economic History of Europe* (Boston: Heath, 1952), p. 275.
[84] Mazdorov, *Istoriya,* p. 32.
[85] It was not until 1893 that a Russian-language translation of Luca Pacioli's treatise on double-entry bookkeeping was published.
[86] Mazdorov, *Istoriya,* pp. 32-33.
[87] Ibid., p. 33.

to be used as an accounting text in commercial academies. In 1809, Ivan Akhmatov published *The Italian or Mercantile Book-keeping,* a Russian-language translation or version of the work of De la Porte[88] and Kruz.[89] Books on accounting by Gunter Ludowitz (1789), P. Gessens (1790), and Arnold (1809)[90] were published in translation from the German. The first original book on accounting in Russian, written during 1831-1840 by Klark and Nemihinov, was published in 1840 under the title of *Complete Book-keeping or Accounting Science.*[91] The book gave a detailed exposition of the German system of traders' accounts and recommended the adoption of a "reskontro" accounts settlement book for debtors and creditors, a cash book containing columns for the corresponding accounts, a goods book, a hand book (presumably a memorial book), a summarizing journal, and a main ledger.[92] In 1852, P. Preobrazhenskii's *Agricultural Business,* dealing with agricultural accounting,[93] appeared. The book was based on German agricultural practice, with which the author was well acquainted, and advised a separate accounting for each branch of agricultural activity (growing crops, raising cattle, and so on).[94] The Moscow Agricultural Society, which a few years later sponsored a book on the topic, was interested in promoting improved accounting, presumably in anticipation of the economic consequences of the subsequent emancipation of the serfs (in 1861) on agricultural estates.

The significance, not only of foreign influences but also of foreign accounting specialists, in the spread of accounting in Russia is evidenced by the publication in 1866 of P. Reinbot's[95] *Complete Course of Double and Single Entry Commercial Accounting.* The book was in two volumes: the first dealt with the conduct of accounting in the Russian language, and the second gave an exposition of the conduct of accounting in the French, German, and English languages.[96] His awareness of the contemporary state of accounting in Europe was

[88] M. de la Porter wrote *Le Guide des Negociants et Teneurs de Livres* (Paris, 1685).
[89] Mazdorov, *Istoriya,* p. 34.
[90] Ya. M. Gal'perin, *Kurs balansovogo ucheta* (Moscow, 1934), pp. 131-33.
[91] Galagan, *Schetovodstvo,* p. 137.
[92] Mazdorov, *Istoriya,* p. 35.
[93] A few years earlier, the Prussian agrarian expert, August Haxthausen, visited Russia and made a calculation of the relative profitability of farming in the two countries (Pipes, *Russia,* p. 11).
[94] Mazdorov, *Istoriya,* p. 36.
[95] P. Reinbot was a teacher at the Demidov Commercial Academy in St. Petersburg.
[96] Mazdorov, *Istoriya,* p. 37.

evidenced by the observation contained in the preface to his *Fabrichnoe schetovodstvo* (St. Petersburg 1875) that "on commercial accounting in just one language, German, there have been written hundreds of works but on industrial accounting, if in the three languages of Russian, French and German the works written number five, then certainly nothing at all has been applied."

From the 1770s, commerce had been taught in commercial academies and commercial schools in the German states.[97] Generally, not until a century later were commercial academies established in Russia: at Odessa (1861), St. Petersburg — Peterschule (1880), Moscow — Aleksandrovskoe (1885), and Kharkov (1893).[98] However, there were exceptions. In 1772, the Demidov undertaking provided the funds for the foundation of Moscow's first commercial academy at which the courses included "double entry accounting by the Italian method."[99] Eighteen years later, it was transferred to the capital and became the St. Petersburg Academy. In 1804, Arnold established a commercial academy in Moscow. Private commercial education developed during the second half of the 19th century. During the 80s or 90s of the last century A. I. Johnson (Yanson) was giving commercial courses in Moscow.[100]

In Germany in the middle of the 1890s, the Federation for Commercial Education established a commission to investigate the need for full-time commercial education. Its report favored the establishment of commercial colleges which were opened in 1898 and the following years in the German states.[101] These developments did not go unnoticed in Russia. The energetic Minister of Finance Serge Witte, who made considerable efforts to promote industrialization, sponsored a program for the extension of commercial education. On 15 April 1896, *The Basic Regulations for Commercial Education* was published; it provided the impetus for the organization of commercial education in Russia.[102] Between 1896 and 1904, some 200 commercial schools were opened.[103]

The Polytechnical Institute,[104] opened in St. Petersburg in 1902, had a special department for commercial education and provided

[97] Forrester, *Schmalenbach,* pp. 16-17.
[98] Mazdorov, *Istoriya,* p. 18.
[99] Ibid., pp. 17-18.
[100] Ibid., p. 18.
[101] Forrester, *Schmalenbach.*
[102] Mazdorov, *Istoriya,* p. 19.
[103] Riasanovsky, *Russia,* p. 486.
[104] The leading accounting academic at the St. Petersburg Polytechnic Institute was Zazersk, who disappeared from view during World War I.

more advanced instruction. Higher commercial institutes were opened in Moscow (1906),[105] Kiev (1907), and St. Petersburg (1915).[106] Through these courses, students became acquainted with the Continental European school of accounting. About this time, public lectures on mercantile accounting began to be delivered at St. Petersburg University, and on industrial accounting at the St. Petersburg Mining Institute.[107]

The accounting profession emerged in Europe during the 19th century. Following the establishment of the Bologna Society of Accountants in 1807, other provincial societies for accountants were founded in Italy. Societies for accountants were formed in the closing decades of the century in France and Belgium. In Britain, the Institute of Chartered Accountants in England and Wales was established in 1880, and at that time in Italy, the accountancy profession was seeking legal recognition (which was granted in 1906 with the creation of the Collegio dei Ragionieri e Periti Commerciali).

The development of the accountancy profession in Italy and Britain, in particular, had been both noted and used as an example to emulate in Russia. In 1896 Serge Witte made a proposal for the establishment of a professional association for public accountants. However, following a public discussion and a commission of inquiry, the proposal was rejected in 1901 by the State Council.[108] Six years later, the Society of Accountants was formed in Poland.[109]

The proposal for the creation of a professional association had been supported by the journal *Schetovodstvo* (*Accounting*), published from 1888-1904 at St. Petersburg and edited by its proprietor, A. M. Vol'f. The editorial in the initial issue of the journal complained that "there is not a single branch of knowledge to be found in such a state of contempt and wretchedness." Among the long list of European supporters named in the same issue of the journal were G. Cerboni, F. Hügli, E. Leautey, and E. Pisani. The journal featured articles by foreign authors (for example, G. Cerboni on logis-mography in 1891) and

[105] The leading accounting academic at the Moscow Commercial Institute was N. S. Lunskii.
[106] Mazdorov, *Istoriya.*
[107] Ibid.
[108] The attempts to found an accountancy profession in Russia will be considered at greater length in a separate paper.
[109] Following the suppression of the insurrection in 1863, higher education in Poland ceased. Both the Polish school of macroeconomic accounting thought (J. F. Walicki and P. Ciompa) and the formation of the Society of Accountants may be regarded as expressions of an attempt to affirm a distinctive Polish identity.

fostered an interest in Continental European accounting theory and practice.

According to a Soviet source,[110] the journal failed because of an insufficient readership and lack of finance. However, A. M. Vol'f disappears from view at the time of the revolutionary disturbances in 1905, and it is uncertain whether he remained in the country. At that time, the accounting specialist L. Gomberg, who contributed articles to *Schetovodstvo* in 1898 and 1899 but had been studying and teaching in Switzerland, severed his ties with his native country and settled in Geneva and established a distinguished reputation as an accounting specialist in Western Europe. During the 1920s, he wrote a number of works on accounting topics and, in 1929, his work entitled *Histoire critique de la theorie des comptes* was published. He became president of the Swiss association for practicing accountants.[111] Others returned to Russia. In 1906, A. M. Galagan, who had studied in Italy, France, and Germany, returned to Russia to become a distinguished accounting specialist during the 1920s. O. Bauer's *Memuary k istorii bukhgalterii* (*Memoirs on the History of Accounting*) was published in 1911 at Moscow. It appears to have been the only by-product of an abortive attempt by the Dutch scholar P. Kats[112] to organize an international team of specialists, including O. Bauer and H. R. Hatfield, to write a general history of accounting.

It may be remarked that most educated Russians, for whom travel into Western Europe was not unusual at that time, were at ease in at least one West European language. There was a Russian presence at the International Accounting Congress held in 1912 at Charleroi in Belgium. [113] At that congress, the contributions of F. V. Ezerskii and P. Ciompa to accounting thought received commendations.[114]

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[110] N. P. Veitsman, "Polveka sovetskoi uchetnoi periodiki," *Bukhgalterskii uchet,* no. 7 (1973): 69-73. Also Ya. V. Sokolov, "Bukhgalterskaya periodicheskaya pechat' za sovetskoi vlasti," *Bukhgalterskii uchet,* no. 12 (1977): 53-56.

[111] V. P. Filios, "Some Noteworthy Theories from the French and Swiss Tradition in Accounting," *Accounting and Business Research* (Autumn 1981): 267-79.

[112] B. Yamey, "Some Reflections on the Writing of a General History of Accounting," *Accounting and Business Research* (Spring 1981): 127-28.

[113] By contrast, and to judge from the official history of the English and Welsh chartered accountants, the British accountancy profession did not form links with the Continental European accounting profession until after World War I. See *The History of the Institute of Chartered Accountants in England and Wales* (London: Heinemann, 1966).

[114] F. W. Ezerskii (1836-1916) evolved the so-called "Russian triple entry bookkeeping." A brief account of his life was published in the *Soviet Accounting Bulletin* (Winter 1976): 94-97. P. Ciompa attempted a macroeconomic approach to the construction of a theory of accounting. Both Ezerskii and Ciompa attempted to develop distinctive nationalist approaches or contributions to ac-

A more broadly based journal, *Kommercheokii obrazovanie* (*Commercial Education*), edited by E. E. Sivers and N. A. Blatov, was published during 1908-1916.

With the acceleration of industrial development, from the 1880s a considerable amount of capital was invested in Russia by West European countries. Firms in those countries established affiliated enterprises in Russia. It may be presumed that for the major West European firms operating in Russia, the accounting records maintained were not substantially different from those kept in the home country. Probably only the minimum accounting records were written up and not necessarily in the Russian language[115] because of the turbulent labor relations and the risk of intervention in business activities by the government.

Foreign managerial and accounting personnel were introduced into business enterprises under foreign ownership. In these undertakings (such as the English-owned textile mills), the language of management was not necessarily Russian. Thus, Crédit Lyonnais, the only foreign bank allowed to operate in Russia, conducted its accounting in French.[116] The full final accounts and balance sheets for the subsidiary Russian enterprises were compiled at the head office of the parent companies in, for example, Berlin, Paris, or London.

From 1900, the foreign companies were required to file copies of the full statement of accounts and balance sheet in the Russian language with the Ministry of Finance and its local organs; those of British-owned companies were due within two months of the approval of the annual report by the general meeting of the shareholders in England.[117]

The Russian-language versions of the final accounts and balance sheets for the Russian subsidiary companies had to be prepared for submission to the local fiscal office so that industrial taxes might be levied. As in Prussia, industrial tax assessments corresponded to both the capital and profits of business enterprises. (The Prussian Income Tax Law, 1890, requiring businesses to close the account books and calculate the profit annually, appears to have been taken as a model.) According to

counting (that is, Russian and Polish respectively). The controversy between the supporters of "Russian" triple-entry accounting and "Italian" double-entry accounting appears to have been an extension of the contemporary controversy within the Russian intelligentsia between the Slavophiles and the Westerners.

[115] "The accounting and reporting was conducted not only in accordance with the forms of the German, English or French enterprises but frequently in the German, English or French languages" (Mazdorov, *Istoriya,* p. 15).

[116] Ibid.

[117] W. H. Beable, *Commercial Russia* (London: Constable, 1918), p. 89.

the Soviet accounting historian Mazdorov,[118] the falsification of the accounting statements with the intention of minimizing the tax imposed was endemic.[119]

One assessment of the opportunities for foreign investment in Russia was "enormous profits possible and speculative excesses probable: these are the key facts of Russian investment."[120] The reality of the tsarist autocracy found expression in the fact that "Russian company law rests on the basis of a special licence granted by the Government in each separate case. No company may obtain legal existence in Russia unless its founders have its statutes confirmed by the sovereign power."[121] "Each company, foreign or Russian, needed permission not only to incorporate but to make any major changes in its structure, such as increasing capital, floating bonds, or entering a line of business."[122]

Russia's tardiness in developing a money economy (along with its chronic shortage of money), in introducing Arabic numerals and publishing accounting texts, and its ignorance of West European business methods were obstacles to the absorption of the accounting practices evolving in Western Europe. Although the principles of double-entry bookkeeping were known in Russia from the 18th century, its practice spread but slowly among the merchant class. The slow adoption of accounting by the merchants may be attributed to several causes.

First, in Russia the state dominated and absorbed society. The German proverb "Stadt luff macht frei" (literally, "Town air makes free") was irrelevant to Russian conditions. The towns did not acquire corporate status, and the inhabitants were not citizens endowed with civil rights (for example, as in the Low Countries and German states). Russians were not immune to arbitrary depredations by a revenue-hungry autocracy which has been described as a patrimonial regime: "A despot violates the subjects' property rights; a patrimonial ruler does not even acknowledge their existence."[123] Accounting records might be useful to prove a debt in a court of law, but the use of credit was poorly developed by Russian merchants. The existence of account-

[118] Mazdorov, *Istoriya.*

[119] In these respects, the situation in Russia during the closing decades of the tsarist regime foreshadowed the contemporary experience of a number of developing countries.

[120] *Moniteur des Interets Materiels,* the Belgian financial journal in 1898. Quoted in J. P. McKay, *Pioneers for Profit, Foreign Entrepreneurship and Russian Industrialization 1885-1913* (Chicago: University of Chicago, 1970), p. 223.

[121] Beable, *Commercial Russia,* p. 90.

[122] McKay, *Pioneers for Profit,* p. 276.

[123] Pipes, *Russia,* p. 23.

ing records could be disadvantageous by providing evidence of a capacity to bear harsher tax burdens.

Second, commercial development was retarded. "Trade in Muscovite Russia and to a considerable measure in Russia of the imperial period was mainly carried out by barter; money was employed mostly for small-scale cash-and-carry transactions."[124] Even in 1916-1917, it was reported that "cheques are practically unknown. . . . Transactions are almost invariably for cash."[125] Because of the poor development of commercial instruments, an important role was occupied by the Kiev Contract Fair "at which most of the bankers, manufacturers and agriculturalists meet for the settlement of outstanding accounts and to make new contracts involving large sums of money."[126] That is, it provided the means for a clearing house procedure between lenders and borrowers comparable to that provided by the Champagne Fairs in France during 1150-1300.

Because of the poor internal communications, aggravated by the vast territory of the tsarist empire, and the absence of the instruments of commerce familiar in Western Europe, the Russian merchant, until the close of the 19th century, was an itinerant trader compelled to journey from fair to fair.

He was usually illiterate, even when doing business in the millions; and if he knew how to read and write, he usually had no idea how to keep account books, preferring to rely on memory. Ignorance of book-keeping was a major cause of business failures in Russia and a great deterrent to the growth of firms. Many a successful enterprise collapsed after the death of its founder because his heirs could not carry on for want of account books.[127]

Third, the dominant influences molding both the mercantile and domestic behavior of Russian merchants were not European but Asiatic. From the time when the Golden Horde overwhelmed ancient Russia, the Russian merchants had strong commercial links with the orient, trading directly or through intermediaries into the Levant, Persia, India, and China (where at one time they enjoyed exclusive trading privileges). Porcelain and other luxury goods came into Russia by the overland route from China.

The long tradition of Levantine trade made a deep and lasting impression on the Russian merchant class, which was not erased by subsequent relations with the West. The point is that in Asia the Russians traded more or less directly and on equal terms, whereas in the West, where they faced a highly

[124] Ibid., p. 206.
[125] Beable, *Commercial Russia,* p. 80.
[126] Ibid., p. 206.
[127] Pipes, *Russia,* p. 207.

sophisticated market, they had to rely on foreign intermediaries. Russian merchants almost never ventured on business to Western Europe — it was Westerners who came to Russia to buy and sell.[128]

Ivan Goncharov, the novelist and son of a well-to-do merchant, attended the Moscow Commercial School during the 1820s and later commented on the behavior of the Russian merchants: "They were generally speaking impervious to economic truths about the desirability for a quick turnover of capital, increased production and exchange of goods."[129] In August 1904, the French ambassador M. Bompard had declared that the Russian merchants, except for some honorable exceptions, were "rapacious and unscrupulous hawkers."[130] The same ambassador recounted that when the Belgian founder-director of the international Societe des Wagons-lits protested at the nonpayment of a debt by the Russian government, the Minister of Finance Serge Witte tore up the contract before the unfortunate founder-director and sent him away empty-handed.[131]

The Russian merchant was comparable to the medieval merchant

> who drew his profit from the monopoly of the carrying trade between economically backward and geographically remote areas. This profit might be derived from the import of articles of small bulk and high prices . . . or from the exploitation of the different prices of everyday consumption as between one local area and another.[132]

The Russian merchant was in essence a higgler,[133] engaged in opportunistic profit-making, buying cheap and selling dear, carrying small stocks, transacting his business in cash or by bilateral barter transactions, and settling his outstanding debts only when pressed (on the assumption that if he ignored his obligations, he might very well not have to settle at all).[134] "The Russian merchant is not endowed with the spirit of

[128] Ibid., p. 204.

[129] I. Goncharov, *Oblomov* (London: Penguin, 1954), p. 129.

[130] M. Bompard, "Mon ambassade en Russie 1903-1908," quoted in M. Kochan, *The Last Days of Imperial Russia* (London: Weidenfeld and Nicolson, 1976), p. 14.

[131] Ibid., pp. 277-78.

[132] R. Hilton, "Capitalism — What's in a Name?" in *The Transition from Feudalism to Capitalism*, ed. R. Hilton (London: Verson, 1978), p. 149.

[133] The term "higgler" is derived from P. Wiles, *Price, Cost and Output* (Oxford: Blackwell, 1956) in which a fruitful schema containing five categories of business operators (that is, primitive higglers, price-takers, full-cost chargers, discontinuous producers, and marginal cost chargers) is provided, and their consequential attitudes toward accounting. ". . . the primitive higgler is too primitive to base his actions on any serious accountancy at all" (p. 41). There are various sorts of higglers, apart from primitive higglers, although the general rule on accountancy is held to hold.

[134] Beable, *Commercial Russia*, p. 77.

enterprise which is necessary for the development of present-day trade," it was stated on the eve of the revolutionary year of 1917.[135] Such a person could ascertain how he had fared simply by adding up his wealth on different occasions.[136]

During the First World War in the warring countries, there was a rising tide of popular anger against the substantial gains of the "war profiteers." In Britain, the government was moved for the first time to introduce the taxation of business profits. In the manufacturing industry of Russia, workers' surveillance over business accounts came to be exercised by workers' factory committees.[137]

Although there had been a considerable investment of West European capital in Russia, until 1916 no West European firm of public accountants obtained permission to open an office. The first office for a Russian public accountant had been opened forty-one years earlier in St. Petersburg. However, commercial interests in Britain considered that a victorious outcome to the war against Germany would result in the acquisition of the latter country's extensive export markets in Russia. In the correspondence columns of a British accountancy journal in April 1916, a Moscow merchant, Waldemar Wengeroff, complained of a lack of interest by English manufacturers in developing Russian markets.[138] "Upon such matters as this, merchants in a large way of business do not, as a rule, seek much guidance from their professional accountants," the journal observed ruefully.[139] In October 1916, Price Waterhouse and W. B. Peat & Co. combined to open an office in the capital, by then renamed Petrograd. However, with the outbreak of the cataclysmic revolution in the following year, the temporary staff departed, "leaving the firm's books and petty cash behind."[140]

AFTER THE OCTOBER REVOLUTION

Following the upheavals of the revolution, civil war, and the Wars of Foreign Intervention, Russia was bereft of managerial and accounting skills. "Industrialists and financiers, followed by merchants, left the country 'en masse.' "[141] Social upheaval and dislocation following

[135] A. Raffalovich, ed., *Russia: Its Trade and Commerce* (London: King, 1918), p. 296.
[136] Mazdorov, *Istoriya,* p. 11.
[137] D. Brown, *Doomsday* (London: Sedgwick and Jackson, 1975), p. 112.
[138] *The Accountant* (15 April 1916): 430.
[139] *The Accountant* (22 April 1916): 456.
[140] Private communication to the current author.
[141] J. Elleinstein, *The Stalin Phenomenon* (London: Lawrence and Wishart, 1976), p. 13.

revolution and civil war led to the disintegration of accounting systems, and with the dash for instant Communism (that is, the period of War Communism, 1918-1921), accounting was discarded. "In the absence of financial accounting and control, of profit and loss statements, it was impossible to form a serious idea of the relative conditions of any enterprise."[142] It was the only occasion on which a modern economy has attempted to get along without accounting, and its absence contributed to the economic dislocation characterizing those years.

Accounting controls were gradually reintroduced and strengthened following the introduction of the New Economic Policy (1921) and more especially after the completion of the monetary reform (1924). With the disappearance of the managerial cadres through imigration, elimination, or mere dispossession, the Bolsheviks were dependent upon the remaining Russian bourgeois accounting specialists, principally teachers and graduates in accounting of the commercial institutes, for rebuilding accounting systems in the nationalized enterprises. An important group of accounting specialists, previously associated with the Moscow Commercial Institute, included A. M. Galagan, N. S. Lunskii, and R. Ya Veitsman.

It was during the years of the New Economic Policy that Russian accounting specialists made a determined effort both to popularize and borrow from the achievements of West European accounting. It represented an application of Lenin's precept of learning from the latest achievements of capitalism. During the latter half of the 1920s, Russian accounting specialists were concerned with imitating the best Continental European accounting practice, for example as represented by the work of Professor A. Calmes of the Berlin Technical College. His work, such as *Die Fabrikbuchhaltung* published in 1922 and, in a Russian translation *Fabrichnaya bukhgalteriya* in 1926, was concerned with the adaptation of mercantile accounting to the requirements of manufacturing industry. In the years 1924-1930, a number of European accounting works were translated into Russian and published, including the following:

P. Gerstner	*Revisions-technik*
A. Guilbault and E. Leautey	*Principes généraux de comptabilité*
H. W. Hall	*Dieselbstkostenberechnung und die moderne Organisation von MaschinenFabriken*
F. Hügli	*Die Buchhaltungsstudien*

[142] Clarkson, *History of Russia,* p. 604.

F. Hügli	*Die Buchhaltungs-Systeme und Buchhaltungs-Formen*
J. F. Schär	*Die Buchhaltung und die Bilanz*
J. F. Schär	*Methodik der Buchhaltung*
E. Schmalenbach	*Die Kontenrahmen*

There were also translations of works by W. Le Coutre. A number of the Austro-Marxists were interested in the problems of accounting and finance in a socialist society, and at this time studies of such subjects were published in translated works by O. Leuchter and K. Renner.

There were no translations of any English works on accounting. In the opinion of A. M. Galagan, with the growth of industry in England, all thought of developing an accounting theory (schetovedenie) had been repudiated so that nearly all of the published books on accounting were but expressions of accounting practice (schetovodstvo).[143] Perhaps, not surprisingly, the work of England's sole professor of accounting, L. R. Dicksee, was regarded poorly.[144]

In some of these texts, the preparation of a predetermined cost for a production job was proposed based upon a technical specification of the work to be performed and the processes to be used. The predetermined cost (vorkalkulation) was distinguished from a cost estimate, the latter being merely a forecast of expected costs. The actual cost computation (nachkalkulation), prepared after the completion of the job, was to be compared with the predetermined cost, but there was no suggestion that the cost differences should be analyzed and recorded. Industrial accounting was subdivided into commercial bookkeeping, product cost compilation, and statistics. More emphasis was placed upon the compilation and examination of statistical data than was customary in British accounting practice. There was a corresponding influence upon the unfolding practice of accounting in the USSR.

In 1924, S. A. Laktionov's small book based on his experience accumulated over thirty years while working in Russian and German factories was published. He criticized the haphazard and old-fashioned production organization found in Russian factories and gave an exposition of the best practice he had encountered. In the factory, the preparation of a vorkalkulation, a technical specification, and a nachkalkulation was required. The trading cost computation (torgovaya Kal'kulyatsiya) was inclusive of profit. He stressed the importance of a well-organized system for the flow of production documentation. He suggested that the system be used for the direct monitoring of the job

[143] Galagan, *Schetovdstvo,* pp. 155-57.
[144] Ibid.

during its execution. There was no suggestion that the vorkalkulation and the nachkalkulation should be compared. The former was to be used for the determination of the selling price and the time required for the execution of the job.[145]

A monthly journal *Schetovodstvo* was published from 1923-30, some of its collaborators having been associated with the prerevolutionary periodical. The journal provided an exposition of foreign accounting practice, particularly the application of loose-leaf and card accounting systems (presumably drawing upon German experience with such systems) and also of the accounting analysis formulae developed by J. F. Schär.[146] *Vestnik schetovodstva,* published 1923-26, was concerned with the theoretical aspects of accounting and up to one-third of the journal's pages were occupied by translations of articles by foreign authors.[147]

In 1926, a Soviet delegation attended the International Congress of Accountants held in Amsterdam.[148] The delegation was led by Bogorodskii who had translated from the French the book written by A. Guilbault and E. Leautey. Three years later, another Soviet delegation visited a machine accounting exhibition in Paris and six German industrial concerns, including Krupps of Essen, Siemens Sickert, Siemens and Halske (Berlin), and the Allgemeine Elektrizität Gesellschaft.[149] At this time, and again in 1934, Schmalenbach received "visits from Russians who questioned him on inter-firm comparisons, cost behaviour and on the national accounting that he was beginning to advocate."[150]

A resolution of the Council of People's Commissars (SNK) dated 8 September 1923 made double-entry accounting obligatory for all enterprises other than small traders and cottage industry. The Supreme Council for the National Economy (VSNKh) acquired responsibility for the conduct of accounting in state enterprises. The revaluation for the basic means of production on 1 October 1924 appears to have been influenced by the spirit of the German pioneer of replacement cost accounting, F. Schmidt,[151] who called for "values sufficient to replace

[145] S. A. Laktionov, *Tekhnika ucheta i kontrolya elementov proizvodstvo* (Kharkov, 1924).

[146] Vietsman, "Polveka sovetskoi," pp. 69-73.

[147] Sokolv, "Bukhgalterskaya periodicheskaya," pp. 53-56.

[148] Mazdorov, *Istoriya,* p. 126.

[149] Ibid., pp. 126-27.

[150] Forrester, *Schmalenbach,* p. 60.

[151] It is not known whether F. Schmidt's *Die organische Tageswertbilanz* was translated into Russian. He presented a paper on "The Valuation of Fixed Assets in Financial Statements" to the International Congress of Accountants held in September 1929 in New York. Later, the paper was published in *The Accountant* (16 November 1929): 616-26.

such assets" using replacement cost indices so that "capital ceases to have significance in itself, and is expressed as the sum of current prices of net assets."[152]

In 1925, VSNKh issued the first national chart of accounts and, in the following year, issued an initial plan of corresponding accounts showing the accounts to be debited and credited in respect to each different type of transaction. The former, a static classification of the balance sheet accounts, may have been influenced by the work of the younger J. F. Schär. The latter, a dynamic classification of current accounts, may have been influenced by the work of E. Schmalenbach.

In 1926, the State Trading Commission (Gostorg) attempted to apply the German system of accounting, Durchschriebsystem.[153] From the experience gained with German carbon-copy accounting systems, the Kopiuchet (Kopiroval'naya forma ucheta) was developed. During 1925-1927, the card voucher form of accounting was introduced. For each operation (transaction), a record card (voucher) was raised in three copies to provide for a chronological accounting record and for the debit and credit entries into the ledger accounts. The operations were summarized in loose-leaf sheets. A further development was the card-copying form of accounting. For each operation, an entry was made on a card representing the subsidiary account, and simultaneously a duplicate entry was made into one or other of the journals containing the control accounts. The operations were summarized in daily control sheets. The system was applied in Soviet trading enterprises. In the smaller commercial and industrial enterprises, the journal-ledger was adopted.

Based on the experience gained with various accounting systems during the preceding five years, in 1928-1930 the memorial voucher accounting system (memorial'no-ordernaya forma ucheta) was developed and introduced. The system required the use of memorial vouchers (instead of a memorial book), a registration journal, a cash book, an annual main ledger, loose-leaf sheets and cards for the subsidiary accounts, and a balance sheet into which the ledger accounts were closed. The monthly summarization of the accounts and the extraction of monthly results were in accordance with the practice being advocated by E. Schmalenbach and others in Germany. Generally, the formal structure of the memorial voucher accounting system appears to have been much indebted to Continental European accounting practice.

152 Forrester, *Schmalenbach,* p. 39.

153 It was the definitive form of accounting that was borrowed from Germany according to V. A. Mazdorov, "Pretvorenie v zhizn' — Leninskikh idei o sotsialisticheskom uchete," *Bukhgalterskii uchet,* no. 4 (1973): 10-16.

The lasting effects of the absence of that mercantile culture, the importance of which had been remarked upon by J. Needham, the power of the legirons of historical experience in arresting the assimilation of modernized methods of accounting, was stated in vivid terms by N. Osinskii.

Even the most cultured person has an inclination to discuss a subject in general terms without accurate data, without "the figures to hand." They do not have either the habit of balancing income and expenditure or the habit of considering and calculating time — neither their own nor that of anyone else. It reflects the influence of the economically and culturally backward village, which until recently still had a dominant place in our economy and in our bosom the influence of the patriarchial peasant economy and small commodity production predominates.[154]

In the autumn of 1924, the Institute of State Accounting Experts (IGBE) was formed as the professional association for accountants. It was established under the aegis of the Accounting and Reporting Department of the National Commissariat for Workers and Peasants Inspection (NKRKI). The central bureau of IGBE was formed from persons nominated by the Collegium of NKRKI. The purposes for which IGBE had been formed included the verification of the accounts of enterprises and institutions, the provision of advice on accounting matters at the request of the audit commission, the undertaking of investigation and consultations at the request of the central and local organs of NKRKI, and the provision of expert opinions at the request of the legal or administrative organs. There were two grades of membership: full members and candidates. Every candidate was to be attached to a particular full member for a period of two years. It was envisaged that candidates would undertake a cycle of specific practical work as training for full membership, and be required to undergo a qualifying test before becoming a full member. The practices of the Italian and English professional associations were used as a guide in determining the conditions for membership of the IGBE.

As the campaign against bourgeois specialists gathered momentum,

[154] N. Osinskii, *Chto znachit uchet* (Moscow, 1932). The section quoted began with an echo of a then-recent speech by Stalin (in which he said "business executives must direct their enterprises not 'in general,' not 'abstractly' but concretely, with an eye to particulars; they must approach every question that arises not just for the sake of idle utterances, but in a strictly businesslike manner") and ended with an oblique reference to Marx (who had written that "the book-keeping tenant-farmer was not produced until the rise of capitalist agriculture" and that "the individual producer of commodities" kept "account only in his head"). It was indicative of the milieu of mental associations within which the accounting controversy proceeded.

IGBE was alleged to be dominated by representatives of bourgeois theory. There were complaints that old bookkeepers — party members — were unable to join the institute. In 1931, IGBE was dissolved. The Russian bourgeois accounting specialists argued that the principles of accounting remained unaffected by changes in the socioeconomic formation of society. These views dominated the publications and teaching of accounting during the 1920s. At the close of the decade, these specialists were being criticized fiercely as protagonists for and purveyors of bourgeois accounting theories.

In April 1929, the 16th Party Conference adopted the first Five Year Plan and took a decision to develop a unified system of national economic accounting (that is, to realize Lenin's conception of general, universal accounting and control). The ideological struggle in the field of accounting gained momentum in 1930 at the first All-Union Conference of the Society of Accounting Workers. The influential journal *Schetovodstvo,* with a circulation of 10,000, was replaced by the proselyting journal *Za sotsialisticheskii uchet.* A campaign was waged against "petit-bourgeois," "right opportunist," and "Trotskyist" views on the role of accounting in socialist society.

In 1929, through *Schetovodstvo,* a challenge had been issued to the accounting specialists to declare whether or not they stood on the side of "the obsolete accounting ideas serving the interest of private capital." At the beginning of 1931, N. Laskin complained

> up to today there still has not been worked out on a Marxist-Leninist basis the general theory of Soviet accounting as a component of the study of the economics of the Soviet economy. . . . our contemporary accounting theory needs a radical reworking with the aim of bringing it into correspondence with the conditions and tasks of the reconstruction period. . . .[155]

To break the domination of the bourgeois accounting specialists, a social court was held for the purpose of denouncing the "harmful" bourgeois accounting theories and practices. The special court was convened in April 1931 in Moscow, and arraigned in the dock, as the representative for the indicted theories and practices, was the distinguished accounting specialist A. M. Galagan.

At the beginning of 1932, the onslaught on bourgeois specialists in all aspects of intellectual activity, not excluding accounting, was intensified. The leading accounting scholars were accused, both through their teaching and their published works, of infiltrating anti-Bolshevik, anti-

[155] N. Laskin, "The Theory of Unified Soviet Accounting and the Artful Tricks of Professor A. M. Galagan," *Za sotsialisticheskii uchet,* no. 2 (1931): 70-80.

working class views on accounting[156] that were favorable to a restoration of capitalism. Either temporarily or permanently, a number of leading accounting scholars — including Andreev, N. A. Blatov, A. M. Galagan, N. A. Kiparisov, N. S. Lunskii, A. P. Rudanovskii, and R. Ya. Veitsman — were forced from public life and their books blacklisted.

The accounting journals and the accounting associations were closed. "Then began a widespread assimilation of the Leninist legacy, changing completely the quality of accounting thought and even the style of accounting literature."[157] The consequence was an "accounting crisis" and a radical reorganization of accounting on new, Soviet principles. Years later, the attempt to develop a radically different accounting theory was appraised as follows:

> It is a misfortune for all students that the authors of accounting texts — Leont'ev, Gleikh and so on — began by promising to present Soviet accounting theory but expounded Schär's dual series of accounts theory[158] and in an inferior manner.[159]

Nevertheless, the relatively free inward flow of information providing an awareness and understanding of West European accounting thought and practice ceased.[160] The "European connection," linking accounting in Russia with accounting in a wider world, was severed and has never been repaired.

CONCLUDING OBSERVATIONS

This paper has not attempted to present a history of accounting in

[156] For example, at that time it was asserted that A. Guilbaut and E. Leautey, writing in the wake of the suppression of the Paris Commune, had advanced a theory of the harmonization of the interests of antagonistic social classes by means of accounting. However, decades later it was affirmed that A. Guilbaut and E. Leautey, *Principes generaux de compatibilité,* and J. F. Schär, *Die Buchhaltung und die Bilanz,* were "among the best in European accounting literature" according to N. R. Veitsman, "K podgotovke kursa 'Istoriya bukhgalterskogo ucheta,'" *Bukhgalterskii uchet,* no. 5 (1976): 71-75. (N. R. Veitsman, or Veitsman junior, ought not to be confused with R. Ya. Veitsman, or Veitsman senior. Both are now deceased.)

[157] Ya. V. Sokolov, "Bukhgaltersii uchet v pervoi pyatiletke," *Bukhgalterskii uchet,* no. 6 (1979): 7-10.

[158] J. F. Schär's dual series of accounts theory or two accounts theory (Zweikontentheorie) is described briefly in K. Käfer, *Theory of Accounts in Double-Entry Bookkeeping* (Urbana, Ill.: Center for International Education and Research in Accounting, University of Illinois at Urbana-Champaign, 1966), pp. 19-20.

[159] E. P. Voznesenskii quoted in an unpublished Soviet manuscript.

[160] The paucity of the West European accounting sources tapped at the present time is indicated in the recent book by two distinguished Soviet accounting academics: V. F. Palii and Ya. V. Sokolov, *Vvedenie v teoriya bukhgaltenskogo ucheta* (*Introduction to Accounting Theory*) (Moscow, 1979). See references numbered 215 to 256 listed on pp. 287-89 of that work.

Russia. Instead, the aim has been somewhat modest: to indicate the links between the evolution of accounting in Russia and its evolution elsewhere in Europe. Scholars working in relatively unexplored terrain have an obligation to indicate the connections with better-known territory, to indicate possible paths for further exploration even if only to reduce the labors of other scholars in hacking a path through the undergrowth.

There is a second obligation: to indicate the relevance, or potential relevance, of the work in the real world, even if only to reassure the paymaster that it amounts to more than mere indulgence in an intellectual game. There are two points that can be made in discharge of the second obligation. These concern the transfer of accounting procedures and accounting development.

When Russia has reached out to borrow from the West, it has been for technology primarily, not business practices. It was thus in the 17th and 19th centuries, and it is so at the present time. Indeed, there may be opposition to the importation of Western accounting practices as undermining cherished values (for example, held by the Church in the 17th century and by the party today). That is, foreign accounting practices have been deemed to be impregnated with cultural values inimical to Russia. Or there may be relative indifference to foreign accounting practices (such as in the late 19th century). The periods when Russia has gone out to borrow foreign accounting procedures have been both infrequent and short (for instance, the latter part of the reign of Peter I and the New Economic Policy period).

It was a boast of the tsarist regime that Russia was neither China nor Turkey, both of which had been compelled to grant extra-territorial rights to the European imperial powers (capitulations and treaty ports, respectively). The Russian Revolution of 1917 has been described as a revolt against Western imperialism in the most advanced eastern country.[161] Russia has oscillated between a willing acceptance and a rejection of foreign accounting procedures. There is no correlation between a willingness to accept modern technology and a willingness to accept modern accounting techniques.

It may be remarked that other nations able to do so have sought to protect their native culture from being submerged by European cultural values. For example, during the greater part of the Edo Period (1600-1868), Japan was closed to European influences.

The model of accounting evolution abstracted from the experience of Western Europe does not necessarily have universal validity. In in-

[161] E. H. Carr, *1917 Before and After* (London: Macmillan, 1969), p. 31.

dustrializing capitalist countries in which the state divested itself of economic functions, as happened in Britain during the era of laissez-faire, the focus of accounting became the individual business enterprise. In Britain during its industrial revolution, the state relied upon private contractors for military supplies so that a tradition of cameral accounting failed to become established. Eventually, and inevitably, stagnation overtook accounting in the state sector. Accounting was fashioned increasingly as a tool to aid entrepreneurs in the extraction of profits and the accumulation of capital. A distorted conception of the role of accounting in society, based on the experience of the pioneering industrial country, gained common currency.

Given that accounting is a dependent variable, then if a linear theory of socioeconomic development[162] is discarded for a multilinear theory, it becomes necessary to consider that accounting evolution may proceed along different paths in different countries. The cultural and institutional factors determining the nature of accounting evolution are different in a individualistic economy from those operating in a statist economy. It is a proposition having relevance to those non-European countries opting for a noncapitalist road to a developed economy.

Where the impetus for economic development is provided by entrepreneurs, they are likely to be innovative in accounting procedures, but where the impetus for economic development is provided by the state, it is likely to provide the pressure for accounting development. However, because the practice of accounting is essentially utilitarian, and it is fashioned to meet the requirements of the primary user, the orientation of accounting is likely to be different in the two instances — in the one instance, as a tool of enterprise management; in the other, as a tool of state administration. In the former instance, at least initially, accounting is likely to be highly differentiated as between one and another enterprise (so as to obtain the closest match to management's perceived needs). In the latter instance, a tendency to compulsory imposition of standardized accounting procedures (so as to obtain data suitable for subsequent statistical processing — aggregation, summarization, and so forth).

During the first decade of development, there was an easy presumption of the beneficence of transferring technology from the major industrialized countries to the poor countries. There was a parallel

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[162] That is, all societies progress through the stages of slavery, feudalism, and capitalism.

presumption concerning the transfer of accounting procedures.[163] There was a concomitant tendency to regard the traditional cultural values as impediments to the adoption of modern accounting procedures.[164] Now more attention is being directed to the question of fitness for purpose (that is, appropriate technology). The situation is similar with accounting.

With some two decades of experience in attempting to apply business enterprise accounting in developing countries, there has been a growing recognition of its inapposite qualities. That is, there may not be an accounting model universally applicable in all countries irrespective of their historical experience and cultural traditions. Indeed, to judge from the historical example of the USSR, from its resistance to foreign accounting practices, it may be concluded that there is no universally acceptable accounting model. Moreover, it should be remembered that Soviet accounting has influenced accounting practice in countries as geographically separated as China, Czechoslovakia, and Cuba.

It is comprehended that the transnational corporations would wish for a commonality of accounting practices to be applied in the countries in which their operations are conducted. It is presumptuous, however, to move from such a realization to a concept of international accounting, if by that term is meant a set of accounting practices[165] with universal acceptability (that is, by all countries) and applicability (in diverse socioeconomic conditions).

Looking outward from the privileged position of the developed countries, it may not be amiss to recall Lenin's conception of the social function of accounting: "The programme of this acounting and control is simple, clear and intelligible to all; everyone to have bread; everyone to have sound footwear and good clothing; everyone to have warm dwellings. . . ."[166]

It is an objective that has not been realized.[167] Nevertheless, it is the

[163] A commonly held view was that "Enterprise accounting provides great potential for assisting the economic development of developing nations." See G. M. Scott, *Accounting and Developing Nations* (Seattle: University of Washington, 1970), p. 1.

[164] Lee J. Seidler, *The Function of Accounting in Economic Development: Turkey as a Case Study* (New York: Praeger, 1967).

[165] Not merely accounting procedures per se but with account of the operational significance flowing from the manner of their implementation (that is, accounting procedures in action).

[166] V. I. Lenin, *How to Organize Stimulation* (Moscow, 1918).

[167] It is a conception of the accounting task that has received some consideration recently under some such appellation as basic needs accounting. For example, see N. Cassell, "Economic Development Accountancy," *Management Account-*

attempt to fashion accounting into a tool of state administration that so clearly separates the Russian accounting experience. And, it may be ventured, it is in the context of accounting as a societal tool, rather than as a tool ministering to the needs of a particular interest group in society, that the evolution of accounting in Russia may prove to be of interest and its study yield useful insights.

APPENDIX

V. A. Mazdorov was the first Soviet specialist to write on accounting history after a lapse of over thirty years. In 1975, accounting history was permitted to re-enter the syllabus as an optional subject. Its exploration is regarded as a difficult subject by Soviet specialists. Further, it should be remembered that published work is expected to be compatible with an approved ideological framework. Therefore, the late Professor Mazdorov's location of the introduction of double-entry bookkeeping in Russia in the reign of Peter I ought to be regarded with a degree of caution. The statement does not find collaboration in the work of scholars published during the 1920s and 1930s, for example, Ya. M. Gal'perin (Moscow, 1934), N. A. Kiparisov (Moscow, 1940), Leont'ev, Kedrov and S. A. Shchenkov (Moscow, 1938). Both A. M. Galagan, *Schetovdstvo v ego istoricheskom razvitii* (Moscow, 1927) and A. L. Lozinskii, *K istorii razvitiya bukhgalterskogo ucheta* (Moscow, 1939) are silent concerning the date of its introduction. According to A. Sumtsov, *Kurs bukhgalterskogo ucheta* (Moscow, 1948), p. 23, double-entry bookkeeping was introduced in the second half of the 18th century and applied initially in the state mining and metallurgical enterprises. Therefore, Mazdorov's testimony should be treated with a measure of caution.

The attempt to adopt double-entry accounting for state administration in Austria during the reign of Maria Theresa proved unsuccessful, and it was replaced by cameral accounting (Galagan, *Schetovodstvo,* pp. 163-64). Similarly, the application of double-entry accounting to state administration in France under Colbert during the 17th century was later abandoned. See Forrester, *Schmalenbach,* p. 30.

Double-entry bookkeeping may well have been introduced into Russia as a potential tool for state administration during the reign of Peter I, but the degree of success accompanying its presumed application at that time should be questioned.

For state administration, double-entry accounting was not adopted in Austria and Germany until the early 20th century and in Russia generally not until 1922 (Galagan, *Schetovodstvo,* p. 161).

ing (UK) (May 1979): 23-24; and "New Challenges for Accountants in Development . . . the Way Ahead?" *Management Accounting* (UK) (January 1980):28-32. In private correspondence, M. Cassell expressed the view that "Economic Development Accountancy should focus first on the basic needs concept and then turn to an analysis of principal operational questions that arise out of seeking to meet basic needs within a definite timetable and definitive cost."

A Global Perspective to Financial Reporting

STEVEN J. GOLUB*

The dimensions of financial reporting in the United States and internationally have expanded rapidly in the last decade. The development of accounting literature has been significant in recent years in many countries. Furthermore, there are many factors that indicate a continuation of such a trend in the 1980s.

Imagine that you are the chief financial officer of a multinational enterprise presently operating in fifty countries and whose securities are traded on the London, Stockholm, and New York stock exchanges. The enterprise's operations and owners are geographically dispersed in a manner so that no single country has a majority of the operations or the owners — not an uncommon situation today for some multinational enterprises.

Such geographical dispersion raises many reporting questions not faced by enterprises operating only in the United States. For example, as the chief financial officer, you would be faced with the choice of selecting a single set of accounting principles to be used uniformly throughout the world and therefore reporting to a majority of the users of the enterprise's financial reports under a set of foreign accounting principles with which such users may not be familiar or of preparing several financial reports under different sets of accounting principles, each showing different results of operations and financial position and disclosing events and transactions in a different manner — not an easy choice to make for any management. As our modes of transportation and communication have improved and our world continues to shrink, however, more and more managements of multi-

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national enterprises will be faced with that choice as such enterprises expand their operations around the world and access securities markets in several countries.

The expansion and diversification of multinational enterprises, the significant advances in communication technology, and the changing arena for international investments have all helped to create a need for closer coordination of securities markets and standards of financial accounting and reporting on an international basis. An indication of the increased volume of foreign securities transactions can be seen from the results of a survey performed by Morgan Guaranty Trust Company.[1] That survey indicated that the amount of bonds sold by enterprises outside their home country increased from less than $5 billion in 1970 to more than $40 billion in 1980.

FOREIGN INVESTMENT

Issuers in today's capital marketplace have many reasons for offering their securities to foreign investors. While the most obvious reason is to obtain new sources of capital at the highest possible price, others include:

1. Developing a local capital market in the foreign country for an enterprise's securities so that such securities could be used for acquisition purposes in the future;
2. Hedging foreign operations by issuing debt repayable in that foreign currency;
3. Creating local interest and loyalty in the investing enterprise and hopefully a more favorable environment for operations; and
4. Alleviating the effects of currency laws and restrictions.

Additionally, local tax laws sometimes provide a unique investment opportunity, making a security more attractive in a foreign market than in its home market. For example, Japanese investors have found the zero coupon Eurobonds attractive because under existing Japanese tax law, the accretion of the discount is treated as capital gains rather than as interest income.

For the issuer seeking foreign capital, the United States probably has the largest and best-developed capital markets. It has few currency restrictions, thus allowing easy entry and withdrawal by the foreign investor. Many potential foreign issuers, however, feel that entry into the U.S. capital market is unattractive because entry into such a market would require reporting to, and following the regulations of, the U.S.

[1] Stan Crock, "Differences in Rules Tangle Trading in Growing World Securities Market," *Wall Street Journal,* 10 November 1981, p. 29.

Securities and Exchange Commission (SEC) — an uncertainty that discourages many foreign enterprises from entering the U.S. capital market.

THE U.S. SECURITIES AND EXCHANGE COMMISSION

Although the SEC's principal function is to protect investors, many believe that the SEC should recognize the special problems of the foreign issuer. The foreign issuer often views filing reports with the SEC to be a process permeated with uncertainty and complexity. The reporting requirements of U.S. generally accepted accounting principles and the SEC are usually more extensive than the reporting requirements in the foreign issuer's home country. Accordingly, information developed by a foreign enterprise usually must be analyzed, accumulated, and formatted differently to meet the SEC's reporting requirements. Further, the required information must be presented in English and filed with the SEC on a timely basis. Additionally, many foreign registrants view certain U.S. disclosure requirements, such as segment data and compensation of officers and directors, as an intrusion upon proprietary information.

Although foreign issuers would like to have better access to U.S. investors, the heavier reporting burden imposed by the SEC on registrants has been a deterrent to many enterprises. The objective of protecting investors by requiring foreign issuers to make the same disclosures as U.S. issuers conflicts with the desire to increase investors' access to foreign securities in the U.S. capital market and has been recently examined by the SEC in its proposed releases on an integrated disclosure system for foreign private issuers (a foreign private issuer is defined as any foreign issuer other than a foreign government). In a recent release, the SEC articulates this conflict as follows:

> The Commission has generally perceived its function as neither discriminating against nor encouraging foreign investment in the United States or investments in foreign securities. The Commission's rulemaking authority in this area is conditioned upon findings that the relevant rule or form is necessary for the protection of investors and in the public interest.
>
> In considering these findings in the context of the position of neutrality explained above, the Commission must evaluate two competing policies. One is the recognition that the investing public in the United States needs the same type of basic information disclosed for an investment decision regardless of whether the issuer is foreign or domestic. This view suggests that foreign registrants be subject to exactly the same requirements as domestic ones. The other is that the interests of the public are served by an opportunity to invest in a variety of securities, including foreign securities. An implication of this policy is that the imposition on foreign issuers of the same disclosure standards applicable to domestic issuers could discourage offerings of foreign

securities in the United States, thereby depriving United States investors of the opportunity to invest in foreign securities. According to this reasoning, the public interest would be best served by encouraging foreign issuers to register their securities with the Commission.[2]

AN INTEGRATED DISCLOSURE SYSTEM FOR FOREIGN ISSUERS

The SEC's proposed integrated disclosure system for foreign private issuers is premised on the same objectives as the system that has been established for U.S. issuers. Both systems are premised on the belief that investors expect to be furnished the same basic information package both to support current information requirements of an active trading market and to provide information in connection with the sale of newly issued securities. The SEC's initiatives are intended to improve disclosure to investors and other users of financial information, achieve a single disclosure system at reduced cost, and reduce current impediments to combining shareholder communications with official SEC filings.

The essential components of the basic information package for both U.S. and foreign issuers are audited financial statements, a summary of selected financial data, and a meaningful description of an enterprise's business and financial condition.

The proposed integrated disclosure system for foreign private issuers attempts to balance the competing policies encouraging foreign offerings in the U.S. market by increasing flexibility in reporting requirements, simplifying the registration process, and permitting foreign issuers more time than U.S. issuers to prepare their reports.

The proposed rules recently issued by the SEC provide for significantly more flexibility in meeting the SEC's reporting requirements. For example, under the proposed rules, an alternative disclosure would be allowed for reporting segment information in annual reports filed with the SEC. Such disclosure would require the reporting by segment of sales, but would require only a narrative discussion by segment of operations and profitability where the profitability trend is different from the sales trend. The system also increases flexibility by building in incentives that encourage certain voluntary U.S. disclosures in annual reports by permitting foreign issuers that include such disclosures in their annual reports to use short-form registrations for certain securities offerings. Most important of all, under the proposed rules, the annual report filed with the SEC for a foreign issuer would not be required to include certain U.S. disclosures, such as pension information and reserve recognition accounting data.

[2] The Securities and Exchange Commission, *Securities Act Release No. 33-6360* (20 November 1981), pp. 10-11.

Also, by establishing uniform rules in an integrated disclosure system, the SEC is simplifying the registration process. Such simplification should decrease the time required to register certain securities which in turn would allow more timely access to the securities market, an increasingly important factor in this time of volatile interest rates.

Finally, under the SEC's rules, foreign issuers are permitted more time than U.S. issuers to file their annual reports with the SEC (six months versus three months for a U.S. issuer). Also, unaudited quarterly financial information need not be filed by foreign issuers unless such information is made publicly available in the local country.

HARMONIZATION OF INTERNATIONAL ACCOUNTING AND REPORTING STANDARDS

The SEC's current and proposed guidelines help to promote comparability in financial accounting and reporting. Although the financial statements may be prepared under foreign accounting principles, they must be presented in a format similar to the U.S. format, and net income under the foreign accounting principles would be required to be reconciled to net income as determined under U.S. generally accepted accounting principles.

Many foreign enterprises, however, view this disclosure policy of the SEC as being unnecessary and inappropriate. Such foreign enterprises cite the fact that other countries around the world follow a different policy with respect to foreign issuers. In the United Kingdom, for example, there is no requirement for a foreign issuer to present any financial information on the basis of accounting principles generally accepted in the United Kingdom. Rather U.K. investors must, on their own initiative, seek the differences between the foreign accounting principles on which the financial information is based and U.K. accounting principles.

How can we harmonize these conflicting viewpoints? Needless to say, the task will not be an easy one. The harmonization of international accounting and reporting standards and international securities markets are the goals. Achievement of those goals, however, faces major obstacles, not the least of which are different economic, social, and political objectives among the countries of the world. The effort to harmonize international accounting and reporting standards will require the active involvement of the U.S. and other accounting professions around the world. Similarly, the internationalization of securities markets will require the active involvement of regulatory bodies of many sovereign states. Both will require a willingness to be open minded and consider global as well as local needs in settling accounting and

reporting standards and developing securities regulation. A case in point is the foreign currency translation issue.

FOREIGN CURRENCY TRANSLATION

After much debate and discussion, the Financial Accounting Standards Board (FASB) recently issued Statement of Financial Accounting Standards No. 52, *Foreign Currency Translation,* dated December 1981. Statement No. 52 superseded FASB Statement No. 8, *Accounting for the Translation of Foreign Currency Transactions and Foreign Currency Financial Statements,* dated October 1975. Statement No. 8 had been issued, among other reasons, to establish uniformity in U.S. enterprises' method of foreign currency translation. However, from its date of issuance, Statement No. 8 was the object of widespread dissatisfaction and criticism, primarily directed at perceived shortcomings asserting that Statement No. 8:

1. Unduly emphasized fluctuations in exchange rates by reporting exchange gains and losses and translation adjustments in current income;
2. Resulted in reported foreign currency exposure that was inconsistent with the concurrent economic exposure;
3. Failed to recognize extensive economic hedges of foreign exchange risk exposure; and
4. Distorted the normal relationships within the financial statements of foreign subsidiaries or divisions.

Foreign enterprises shared these criticisms of the temporal method, and very few foreign enterprises, if any, adopted the temporal method of foreign currency translation during the 1970s. Although there was a great diversity of practice among foreign enterprises, most followed some form of the current-rate method of translation.

Accordingly, it should not be surprising that most foreign enterprises view favorably the adoption of the net investment concept and the current rate method of translation in Statement No. 52. In this author's view, the FASB's adoption of the current rate method paves the way for a harmonization of the accounting for foreign currency translation among multinational enterprises around the world. It was not by coincidence when this author was in Scandinavia recently that the professionals whom he met with there had a working knowledge of the new U.S. foreign currency translation standard. In fact, several of the multinational enterprises located there were giving serious consideration to adopting the principles of Statement No. 52 in their financial reports.

The foreign currency translation issue has involved a cooperative international effort between major accounting standard-setting organizations. Representatives of the U. S., Canadian, and U.K. accounting standard-setting organizations held joint meetings to consider the issues. As a result of this effort, the U.K. accounting standard-setting organization issued an exposure draft in 1980 that is similar to Statement No. 52.

The U.K. exposure draft states:

> In the USA, the Financial Accounting Standards Board (FASB) has had FAS 8 under review for some time. In Canada, the Canadian Institute of Chartered Accountants (CICA) has suspended its own standard on foreign currency translation. Conscious of the need for international harmonisation in this field there has been close cooperation between the ASC, the FASB and the CICA. As a result, the FASB has published its Exposure Draft on foreign currency translation which proposes a fundamental change from FAS 8 and which is similar in all material respects to the ASC's proposals set out in this Exposure Draft.[3]

The influence of the standard-setting organizations on each other and the spirit of unification are illustrated in the U.K. exposure draft in discussing its requirement that the average rate be used to translate the income statement:

> (T)he FASB Exposure Draft makes the use of an average rate mandatory. In view of the extent of international harmonisation achieved in this area the method of translation of the profit and loss account would not appear to be of such importance that it was necessary for there to be a difference between the standards.[4]

INTERNATIONAL ACCOUNTING STANDARDS COMMITTEE

The International Accounting Standards Committee (IASC), one of the principal organizations involved in developing international accounting and reporting standards, also has addressed the foreign currency translation issue. In March 1982, the IASC issued a proposed statement on foreign currency translation. The statement is broad enough to be compatible with Statement No. 52 and the U.K. exposure draft on foreign currency translation and allows sufficient latitude to meet the major concerns of the accounting professions of other member countries. For example, while the standard adopts the net investment concept and the current rate method of translation, the standard

[3] Institute of Chartered Accountants in England and Wales, Accounting Standards Committee, *Exposure Draft 27: Accounting for Foreign Currency Translations* (London: ICAEW, 1980).

[4] Ibid.

allows translation gains and losses on nonmonetary items to be deferred and amortized and also allows special considerations for major currency devaluations.

Because its pronouncements have no enforcement capability, IASC's current role is to provide a forum for international discussion of accounting and reporting standards and to attempt to set standards that narrow the range of alternative accounting principles. This primarily influences accounting in less developed countries where little or no guidance exists. Hopefully, the promulgation of IASC pronouncements will also serve to emphasize areas of agreement and disagreement and of common objectives so that countries with more developed accounting standards will consider these factors in establishing future financial accounting and reporting standards. The global harmonization of financial accounting and reporting standards is important not only to provide the international investor with a basis for comparison, but also to increase his or her confidence in the credibility of financial reporting. Disclosure of the effects of the significant differences in accounting policies would be a practicable first step on the road toward harmonization.

CONCLUDING REMARKS

Although the spirit of cooperation and dialogue exhibited in addressing the foreign currency translation issue has been exemplary, we are only in the neophyte stage of developing an international framework for financial accounting and reporting standards. Substantial effort is needed to create an increasing amount of dialogue concerning financial accounting and reporting issues that presently affect multinational enterprises. That effort should also address the protection of investors in foreign securities, an effort that should have three principal objectives: developing international standards of financial accounting and reporting, providing access to foreign investments in local markets, and protecting investors through adequate securities laws.

Such a global perspective for financial reporting obviously faces many significant obstacles, yet we in the United States — regulators, accountants, academics, and businessmen — must make an effort to assure that attractive foreign investments are made more accessible to the U.S. investor while, at the same time, maintaining our high disclosure standards that permit investors to make informed investment decisions. The balancing of these competing policies must receive all of our cooperative attention.

The Impact of International Standards and Other Developments on the German Accounting Profession

WOLFGANG LÜCK*

The development of auditing as an academic discipline and the work of the German auditing profession have recently been affected by the increasing importance of questions of international accounting and auditing. This international dimension of accounting and auditing development had been, with few exceptions, neglected in German academe. Only recently have professors of accounting and auditing concerned themselves increasingly with the international aspects of their discipline. The profession itself was more or less forced to deal with these issues by the harmonization efforts within the European Economic Community in the area of accounting and auditing and also by the increasing investments of German companies in foreign countries. These two factors force the German profession to devote an increasing amount of attention to the international dimension of their work.

It should not be overlooked, however, that German scholars have for many decades intently researched accounting problems which have only recently become the topics of discussion on an international plane (for example, inflation accounting, replacement costing, and capital maintenance). Thus, academic accountants in Germany have more or less neglected international problems in recent history. Since the early sixties, however, the German profession and German private enterprises have concerned themselves increasingly with the developments in the area of international accounting and auditing. In this context, it

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should be mentioned that it was extremely difficult after World War II for German auditors to be accepted in international organizations.

The work of the auditors was influenced by various factors:

1. The increasing internationalization of the German economy forced the German auditor to concern himself with international questions in the interest of his clients.
2. Integration and harmonization efforts of the European Economic Community in the area of company law brought with them an increasing discussion of the international aspects of accounting in which the influence of Great Britain, the Netherlands, and France were particularly important.
3. The difficulties of American accountants in conjunction with bankruptcies and frauds affecting large American companies (which had been discussed in the German press quite extensively) led to certain reforms in the work of the German profession. Very often Anglo-American problems and solutions were considered before any new proposals were accepted.
4. The German auditors found that their previous efforts over the decades in developing auditing and accounting standards were practically unknown abroad mainly due to communication problems.
5. The present collaboration of the German accountants in the work of international organizations was, of course, not without influence.
6. The competition of Big Eight and other Anglo-Saxon accounting firms in the Federal Republic of Germany compelled the German auditors and auditing companies to increase the range of services offered to their clients.
7. The obvious trend toward larger and larger firms and their expansion into foreign and overseas countries was an undeniable influence on international developments.
8. German accounting firms have recently entered into a number of bilateral and multilateral corporate agreements with foreign firms from practically all countries in the world. These agreements brought an automatic need for the German auditor to be concerned with the standards of international accounting and auditing.

INTERNATIONAL TRENDS

There is an increase in internationalization of both accounting and auditing. For the German profession, this influence comes from the European Economic Community, from the Anglo-American, Anglo-Saxon sphere, and last, but not least, there is also the influence of

international organizations. The current discussion will include the following basic principles: (1) the influence of the European Economic Community directly on the German company law; (2) the strong Anglo-Saxon influence on the professional activity of the German Institute der Wirtschaftsprüfer; and (3) the need for German CPAs to observe the standards of all organizations in which the institute holds a membership. That is, German CPAs must observe the standards of the member institute as strictly as German auditing standards. In all cases of conflict, however, the national rules have precedence whenever there is a contradiction between them and international standards.

THE UNDERLYING FACTORS OF INTERNATIONAL ACCOUNTING AND AUDITING AFFECTING THE GERMAN PROFESSION

Various underlying factors led to German involvement in international issues and problems. The following eight points should be noted in this context.

First, the increasing internationalization of the German economy required CPAs to concern themselves with these international questions in order to meet the wishes of their clients. German investments in foreign countries since 1975 compared with those of the period 1949-1975 have increased by more than 50 percent and are now estimated at 66 billion German marks. In 1979, an additional increase of 7.8 billion marks in the direct investments abroad constituted a new record. On the other hand, foreign investments in Germany in 1979 amounted to only 1.9 billion marks, which constitutes the lowest increase since 1962. German companies, small and medium-sized as well as large, have become active participants in foreign markets. The international competition within the auditing profession forced the German CPA to be increasingly concerned with international issues.

Also, the integration and harmonization efforts of the European Economic Community in the area of company law led to a very intensified discussion of international issues, particularly due to the influence of Great Britain, the Netherlands, and France. The treaty establishing the European Economic Community on March 25, 1957, abolished all tariffs and trade restrictions between the original six (later nine, and since January 1, 1980, ten) member states. The intent was to create a common market. Prerequisites for a common market are the freedom of movement for business and professions, and freedom of movement for capital and labor, as well as comparable competitive conditions. The

so-called Treaty of Rome of 1957 therefore provides that the legal conditions in the framework and the most important areas of business should be comparable. The member states have bound themselves[1] to coordinate their laws concerning companies which are engaged in business and to make the corresponding rules and regulations comparable.

To harmonize company law, the commission has suggested a number of directives which have been passed by the council of the economic community. These directives constitute compromises accepted after lengthy negotiations. The intent is to change national law into an international company law.

Another point involves the difficulties faced by foreign, particularly American, accountants in conjunction with bankruptcies and frauds of large companies. These difficulties were widely discussed in the German press and led to certain reforms in the professional work of the German institute. In this work and these reforms, the problems faced by American accountants and their solutions were considered. The reform efforts of American CPAs concerning their profession have been widely discussed in the German press and publications. The activities of Congressman Moss and Senator Metcalf, as well as the public criticism of the accounting establishment, the self-regulatory program of the American Institute of Certified Public Accountants, the establishment of the Financial Accounting Standards Board (FASB), and the various proposals of the Securities and Exchange Commission (SEC) have been followed with great interest. The entire discussion has left its imprint on the German profession. One reason for this is that it had been suggested that the Federal Republic of Germany establish an SEC-like organization as well as an organization comparable to the FASB.

The collaboration within the German profession concerning international organizations has felt the impact of international developments. The objectives, procedures, and the professional work of the most important international organizations have strongly influenced harmonization as well as the international congresses, and seminars on various professional questions have slowly influenced the professional collaboration of the membership countries. They have also significantly influenced the national professional efforts. In addition, there is the influence of the increasing number of studies, recommendations, and guidelines by international institutions and organizations, such as the International Standards of Accounting and Reporting Commission on

[1] Article 54, paragraph 3, letter G, European Economic Community Treaty.

Transnational Corporations published in 1977, or the Guidelines of the OECD for Multinational Companies in 1976.

Another factor influencing German CPAs was the realization that many of their professional standards and opinions developed over several decades were, for all practical purposes, unknown to most of their foreign colleagues except for those few who have a good command of the German language. In order to make the professional efforts better known on an international basis, an English translation of all the important standards and opinions of 1977 was made available for the first time at the 1977 International Congress of Accountants in Munich. They included the following: Statement 1/1977 — Generally Accepted Standards for the Audit of Financial Statements; Statement 2/1977 — Generally Accepted Reporting Standards for the Audit of Financial Statements; and Statement 3/1977 — Standards for the Issue of Audit Opinions. Presently all the important professional standards and opinions, as well as the code of ethics, are being translated into English and French.

Mainly because of the competition from the Big Eight International auditing firms and other Anglo-Saxon firms in the Federal Republic of Germany, German CPAs and CPA companies were compelled to expand the services offered to their clients. The Big Eight and other foreign CPA firms have conquered a significant share of the market in Germany, either practicing in their own name or in cooperation with German CPA firms. Also in the Federal Republic of Germany, the Big Eight must be counted among the largest CPA firms. To be able to audit the affiliates of large German multinational companies, German CPA firms were forced to offer their clientele services on an international scale.

There are clear tendencies toward larger accounting firms in the German profession. Because of this concentration, large German auditing firms are now in a position to establish offices abroad and overseas. One of the consequences of this was that the German profession took an increasing amount of interest in international professional developments. German CPA firms increased their size through merger and through the purchase of a number of medium and small-sized firms. This was done both nationally and internationally in order to improve their competitive position vis-à-vis primarily American auditing firms. This forced German CPA firms to become concerned not only with questions of international accounting and auditing, but also with the profession's legal and political problems on an international scale.

There has recently been a clear trend toward an increasing number of bilateral and multilateral agreements of cooperation between large and small German CPA firms and the foreign firms in Europe serving many countries from all over the world. This automatically implies that German firms must concern themselves with international standards of accounting and auditing. A large number of German auditing firms have recently concluded agreements of cooperation with foreign firms in order to be able to offer full service to their clients, despite the increasing amount of international specialization in the areas of auditing, tax, computerized systems, and business consulting. These new international aspects of professional work have added to the requirements of high professional standards for individual CPAs.

THE IMPACT OF INTERNATIONAL DEVELOPMENTS ON THE GERMAN PROFESSION

The increasing discussion of international issues and problems within the German profession, for which we were able to list a number of causes, has had a lasting impact on the German profession. These consequences will be summarized here.

First, the German Institut der Wirtschaftsprüfer has become a member of numerous international organizations, and German CPAs have accepted leading positions in these organizations. The German institute belongs to the following organizations in which German professionals take a very active and leading part: Union Européenne des Experts Comptables Economiques et Financiers since 1951; Groupe d' Etudes des Experts Comptables de la C.E.E. since 1958; International Coordination Committee for the Accounting Profession since 1972; International Accounting Standards Committee since 1973; and International Federation of Accountants since 1977. The German profession cooperates in these organizations in order to participate in the international development of the accounting profession and to influence these developments.

In addition, the German institute participates in various bilateral consultative committees to clarify and discuss the question of mutual recognition of professional qualifications, to explore the possibility of cooperating with the members of other professions, to compare, on a bilateral basis, auditing and accounting standards, and to discuss the specific bilateral issues concerning the profession. Bilateral advisory committees of this kind have been established with the United States, Great Britain, France, and the Netherlands.

Secondly, the institute coordinates the international professional work through a committee for international cooperation. The most im-

portant purpose of this committee is to coordinate the work of the various German delegates to numerous international bodies, to exchange information, and to develop official opinions on certain issues.

Next, the institute has expressed its opinion on international issues on several occasions. Through its delegates in various organizations, the institute has taken an official stand on basic, current issues. At its annual working meetings, the institute's official stand on international issues is discussed, as it is at numerous regional meetings, in seminars in conjunction with the programs of continuing professional education, and in other professional educational programs.

The institute and the Chamber of Wirtschaftsprüfer have jointly expressed official opinions on EEC Directives 4 and 8. The official opinion on the transition of the EEC's Fourth Directive to German law was presented to the Ministry of Justice at a hearing in October 1980.

There are numerous very interesting and important issues in the Seventh Directive, including questions concerning the equity method, associated companies, consolidation methods, which companies to include in consolidation on a worldwide scale, and the translation of foreign currencies. The institute will officially express its opinion on these issues which must be settled when the Seventh Directive becomes part of German law.

Another consequence of the discussion of international standards is that Anglo-American developments have been reflected in the professional standards of the German profession. In all instances, they have been fully discussed by the appropriate committees of the German profession. The influence of Anglo-Saxon developments on the German CPA profession can be clearly seen when the professional standard 1/1967 is compared with that of 1/1977. Standard 1/1967 merely recommends the examination of the internal control system of a company by the auditor. On the other hand, Standard 1/1977 requires such examination; it emphasized that particularly the examination and evaluation of the internal control system allow the auditor to determine the type and extent of the audit. In addition, Standard 1/1977 emphasizes that the examination of the internal control system becomes increasingly important as companies increase in size and as the accounting becomes more and more automated and computerized. Weaknesses and inadequacies of the internal control system require a commensurate extension of the audit.

The Anglo-Saxon influence can also clearly be seen in the additional requirements of Standard 1/1977: the auditor must be present during

the physical inventory count; confirmations concerning assets administered by third parties must be obtained; confirmations of receivables and payables must be requested; and there must be a clear definition of the principle of professional responsibility when using the results of audits by third parties.

The American discussion concerning the problems of peer review and quality control has been followed with great interest by the German profession. The draft of an opinion of a professional standard on the questions relating to quality control has been sent to all members of the institute.

German auditing firms have established special departments which follow all the international developments and coordinate these developments with the firms as they determine their internal policies. The problems which arise in conjunction with the international association of the auditing profession and the "inflation" of international accounting standards issued by various international organizations can only be reduced to manageable proportions by establishing special international departments, usually called international offices or international bureaus, within the auditing firms. The importance of these international offices is clearly shown by the fact that they are usually directly responsible to the managing partner of a firm.

The professional training programs of candidates for admission to the profession, as well as the continuing education programs, show a clear trend toward the inclusion of international issues. The professional and educational requirements for the CPA profession have significantly changed in the last few years. It is basically expected today, and not just in large international auditing firms, that the professional person be familiar with international issues of auditing and accounting. In the training programs, international aspects are discussed to an increasing extent, and language courses have also been instituted. International accounting and auditing firms frequently exchange specialists as teachers for professional programs within the framework of their cooperative agreements. This permits a more effective exchange of their international experience. In the German professions, training and continuing education programs have been increasingly stressed in the last few years in order to ensure that the prestige of the German profession can be maintained at home and abroad.

The international professional terminology has become part of the German profession's language as a result of the discussion of international issues. Approximately ten years ago, the first book con-

cerning American accounting was published in Germany. In the meantime, a large number of articles concerning worldwide issues of accounting and auditing have been published. Only a few years ago, the concept of materiality was still unknown, but today it has, without having to be translated, become a well-known concept within the profession. Special concepts, such as the equity method, going concern and quality control, the prudence concept, true and fair view, generally accepted accounting principles, generally accepted auditing standards, code of ethics, internal control, statistical sampling, and social accounting, among others, have become established parts of the professional terminology in Germany.

A number of university professors maintain permanent contact with the institute and with international auditing firms in order to exchange views on international issues and to include these issues in their programs of teaching and research. A few universities have turned toward teaching and researching international issues. A number of professors and students annually go abroad to study and to do research concerning international issues. These exchange programs are supported by international auditing firms and by the profession and the German Academic Exchange Service.

DEVELOPMENTS IN THE FUTURE

According to current indications, future international standards and trends will impact on the German profession even more than in the past. The reasons for this are as follows:

1. The increasing internationalization of the German economy and the German profession.
2. More intensive developments in the direction of harmonization of company law within the European Economic Community.
3. The liberalization of the professional laws in the European Economic Community.
4. Increasing concentration trends within the German profession.
5. Conclusion of additional agreements of cooperation with foreign accounting firms.
6. Increasing emphasis of international problems in the work of the German institute.
7. Increasing emphasis of international issues in the training and continuing education programs of all German CPAs.
8. Growing inclusion of international issues, trends, and problems in the research and teaching programs of German universities.

In addition to the international problems the German profession faces, there are at least four problem areas of great importance which are not directly international but will certainly have international implications. These areas, which will be very important in the next few years, concern share ownership in auditing firms (corporations), financial independence, required audits of GmbHs (limited liability company), and compatability of auditing and consulting.

In the question of share ownership in auditing firms, a decision must be made as to what extent nonprofessionals can own shares and vote in auditing companies. The Eighth EEC Directive attempts to prohibit a majority ownership by non-CPAs in CPA companies.

In order to strengthen the CPA's independence and to neutralize nonprofessional influences, the development of the Eighth Directive also provides that the financial independence of an auditor vis-à-vis a client can be questioned whenever more than 10 percent of the auditor's billings depend on a single client. The draft of a transformation law for the Fourth Directive, incorporating the directive into German law, will suggest that a CPA firm cannot be the auditor of a certain company if, during the last five years, more than 25 percent of the firm's total billings for auditing and consulting service came from that particular client.

With the transformation of the Fourth Directive into the German company law, there will be a required audit for limited liability companies. The profession will have to decide whether it can or should undertake these required audits. Most politicians and representatives of industries and the trade unions are of the opinion that only the 4,000 available Wirtschaftsprüfer[2] should be admitted as auditors for these limited liability companies. There are more than 30,000 tax advisors in West Germany who have so far had the more than 200,000 limited liability companies as their clients, yet being only tax advisors, they could not audit and certify financial statements. Losing these clients to the Wirtschaftsprüfer would be a tremendous hardship for such tax advisors. They want either the right to certify financial statements or to be admitted as Wirtschaftsprüfer, but all this without having to pass the rather difficult Wirtschaftsprüfer examination. A political compromise giving the tax advisors a chance to pass a somewhat easier and modified Wirtschaftsprüfer examination within a certain well-defined transition period may be possible. This would avoid

[2] See the Appendix for an explanation of the distinction between wirtschaftsprüfer and tax advisor.

their loss of income. The Wirtschaftsprüfer themselves, however, insist that there should be only one auditing profession with a high-level examination required for entry to that profession.

The question of auditing and consulting is of particular importance to the profession. The so-called transformation law of the Fourth Directive provides that any CPA will be excluded from an audit if he or she is at the same time a consultant to the company in question and if he or she receives for the consultancy a higher fee than for the implementation of the audit.

These four areas, which are closely related one to another and which all have international consequences, will be in the center of the discussions of the German CPA profession within the near future. The profession and the German institute, as well as their colleagues in other countries, will have a serious problem in the near future concerning the numerous proposals, guidelines, recommendations, and standards of various international organizations. These various pronouncements must be coordinated and harmonized with national requirements and regulations. Naturally the proposals made by the EEC authorities in Brussels will be on the forefront; they must be incorporated into national law. Given this inordinate number of new rules, one could speak of an inflation of international proposals, guidelines, opinions, recommendations, and standards; we can only voice a plea that we should start harmonizing the harmonization.

APPENDIX

The admission to the Wirtschaftsprüfer profession requires (1) successful completion of a university curriculum, (2) sufficient practical experience for the practice of the profession, particularly at least five years' experience in the business field, of which at least four must have been concerned with auditing, and (3) passing the Wirtschaftsprüfer examination before an examination board.

The admission to the Steuerberater (tax advisor) profession requires (1) successful completion of a university curriculum, (2) practical experience in the field of tax consulting for three years, and (3) passing the Steuerberater (tax advisor) examination.

As of January 1, 1982, there are 4,065 Wirtschaftsprüfer in Germany and about 30,000 Steuerberater (tax advisors). Of the 4,065 Wirtschaftsprüfer, 2,881 are also tax advisors.

Subject to the Law Regulating the Profession of Wirtschaftsprüfer, the scope of the practice of a Wirtschaftsprüfer is as follows:

1. Wirtschaftsprüfer have the professional task to carry out business audits, in particular to audit the annual financial statements of business enterprises and to report on the audit and the result thereof.
2. Wirtschaftsprüfer are entitled to advise and represent their clients in tax matters in accordance with existing regulations.
3. By virtue of their professional oath, Wirtschaftsprüfer may act as expert witnesses in the field of management of business enterprises.

There are some legally required audits (Vorbehaltsaufgaben) which can *only* be performed by Wirtschaftsprüfer, not by tax advisors. Those audits are the required audits of public limited companies (Aktiengesellschaften), business combinations (Konzerne), banks, and insurance companies, for example.

A Framework for a Linkage between Microaccounting and Macroaccounting for Purposes of Development Planning in Developing Countries

MOHAMED A. MIRGHANI*

INTRODUCTION

Developing countries have been continuously striving to achieve sustained economic growth through the formulation and execution of development plans. Successful developmental efforts are dependent, among other things, upon the availability of reliable economic information for supporting the multitude of decisions that comprise them. Accounting information, as part of an overall information system, could have a significant positive impact on decisions involving planning and programming the economic developments of developing countries.

In the majority of developing countries, there is a lack of awareness of the potential significant role that accounting could play in the economic development process. This lack of awareness is considered by Scott to be due to the fact that

> ... development economists are not aware of the importance of accounting to economic development; or that accounting is thought to be in some sense "given" in that it is considered unalterable, or is assumed to be either adequate, or will be adequately elicited as development proceeds.[1]

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[1] George M. Scott, *Accounting and Developing Nations* (Seattle: University of Washington Press, 1970), p. 1.

In this regard, Needles added that

> . . . many planners involved with economic development tend to assume that if economic actions are taken to speed economic development, accounting development will somehow automatically follow. Formal assessment of the role of accounting in the developing countries does not exist despite its importance in the evaluation of aggregate economic performance, development programming, private enterprise development, and the establishment of capital markets.[2]

In developing countries, the development of accounting should be viewed as equivalent to the development of part of the infrastructure necessary for achieving economic development. It is, therefore, imperative that specific frameworks for the development of accounting, along certain dimensions, need to be established so that the ultimate objective of providing reliable information support for the economic development process can be reached. One important dimension requiring a specific framework is the linkage between microaccounting and macroaccounting for the sake of effective developmental planning. This paper outlines a systematic framework for such a linkage. The methodology used in determining the proposed framework is a combination of a synthesis of the related limited literature and this writer's own personal experience regarding the role of accounting in the economic development process of developing countries.

In this paper, accounting is defined as an information system that provides information for rationalizing economic decisions concerning an economic entity made by decision makers who are insiders or outsiders to the economic entity. The economic entity about which the accounting information system generates information could be a microentity, an industry, an economic sector, or an economy. The accounting information system is an open system and, thus, has the capability to adapt to changes in its environment. This makes a feedback loop vital in the accounting information communication process and, therefore, the accountant can be treated as both a transmitter and receiver of information signals.[3]

ACCOUNTING AND DEVELOPMENT PLANNING

Economic development deals with a country's ability to raise the levels

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[2] Belverd E. Needles, "Implementing a Framework for the International Transfer of Accounting Technology," *International Journal of Accounting* (Fall 1976): 46.

[3] Ronald M. Copeland and Paul E. Dascher, "A Behavioral Perspective of the Accounting Communication Function," *Proceedings of the Fourth Annual Meeting of the American Institute for Decision Sciences* (New Orleans: AIDS, 1972), p. 767.

of economic and social welfare of its population. It is "a transitional process between economic stagnation and economic progress and is achieved through the execution of a series of structural social and economic changes and improvements."[4] The economic development or growth of a country depends mainly on improving the effectiveness and efficiency with which the country's scarce economic resources are utilized. Focusing mainly on increasing the supply of capital would represent the wrong approach to achieve faster growth.[5] Development planning deals with evaluating the performance of a country's economy in order to provide the basis upon which "alternatives have to be measured, weighed and outlined, and priorities for the use of resources established."[6]

Since development planning represents a system of decision making under conditions of great uncertainty, it should be supported by an information system capable of generating the types of information necessary for reducing the amounts of uncertainty surrounding the economic choices that must be made. The development planning process can be likened to the resource allocation process in a micro organization. The management of any organization would attempt to select the package of alternative uses that would yield maximum benefits in view of the constraints operating in that organization's specific environment. Such an exercise would not be fruitful without an information system that would enable management to make rational choices among alternative uses.

The most critical step in the development planning process is evaluating the particular developing country's economic performance in order to provide a solid basis for formulating a feasible development strategy. Evaluating a country's economic performance entails making an adequate analysis of the manner in which the national economy actually functions, and identifying the constraints which have an impact on its direction and rate of development. To do this well, the development economists should have a thorough knowledge of the country in question.[7] Kamarck includes the following questions among those that would most certainly need to be answered in order to evaluate a particular country's economic performance:

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[4] Adolf A. J. Enthoven, *Accountancy and Economic Development Policy* (Amsterdam: North-Holland, 1973), p. 138.

[5] A. M. Kamarck, "The Appraisal of Country Economic Performance," *Development and Cultural Change* (January 1970): 153-54.

[6] Enthoven, *Accountancy,* p. 149.

[7] Kamarck, "Economic Performance," p. 157-58.

1. "What is happening to growth of production and income?"
2. "What is the extent of mobilization of resources for development?"
3. "How efficiently are existing financial resources being used?"[8]

Reliable answers to these questions are dependent upon the availability of reliable information that reflects the economic realities of the particular developing country. Seidler states that ". . . detailed statistical data of the performance of the economy and its various sectors are absolutely necessary if the most efficient utilization of available resources is to be accomplished."[9]

One of the major roadblocks for effective development planning in developing countries is the unavailability of reliable information or the unreliability of available information. The term "lack of information" will be used from this point to denote both unavailability of reliable information and unreliability of available information. Lack of information for development planning could have a number of adverse effects upon exerted developmental efforts. First, selection of a development model would be made on no realistic basis, and the selected development model could very well be one which is completely incompatible with the economic realities of the particular developing country. Second, lack of information could lead to the selection of a development model that covers certain parts of the economy, not because of their importance for future development but because information about them was available. Third, lack of information concerning the interdependencies of the major economic sectors could lead to an internally inconsistent development plan and, therefore, is rather impossible to make operational. Fourth, lack of information regarding the relative scarcity of the resources available for development would misguide the resource allocation process in the economy. Fifth, lack of information about the progress being made toward the achievement of developmental objectives would make it impossible to revise the plan in view of changing conditions. The net effect of such adverse effects is that by the end of a development plan period, no material tangible benefits would accrue to the particular developing country, or if any were to materialize, they would be at an exorbitant cost.

On the basis of evaluating a developing country's economic performance, a development model (or strategy) will need to be selected with the objective of steering economic activities along a path that would eventually lead to sustained economic growth. The selected de-

[8] Ibid., p. 158.
[9] Lee J. Seidler, *The Function of Accounting in Economic Development: Turkey as a Case Study* (New York: F. A. Praeger, 1967), p. 70.

velopment model will be in the form of a macro framework that merely projects totals for the economic activities considered crucial for future development over a certain time span.[10] An effective macro framework for development should possess certain basic qualitative characteristics: realism, comprehensiveness, consistency, and flexibility. Realism requires the developmental objectives to be formulated in view of the developing country's economic realities and potentialities. Comprehensiveness requires the macro framework to encompass all the economic activities and resources necessary for future development. Consistency requires the macro framework's component parts to constitute a coherent whole. Consistency also should be achieved at the level of the goals, the means for achieving them, and the available resources. Flexibility refers to the macro framework's capability of being revised in view of significant changes in its governing factors.[11] This indicates that development planning is a continuous process.

In developing countries, there is a natural tendency to "import" development models similar either to the planner's own developed economy, or, if the planner is a native of the developing country, similar to the economic structure of the country where the planner was educated.[12] This does not mean that the developmental experiences of developed countries are completely irrelevant for developing countries, but rather should be studied, and what is relevant should be adapted to serve the needs of the particular developing country. It would be a costly mistake to adopt or recommend blindly economic models that have worked for developed countries. Also, what must not be done is to take an actual or mental model of a developed country, apply it to a developing country, and, where the developing country does not fit, prescribe changes that will force conformance to the model.[13] Therefore, a very basic prerequisite to effective development planning in a developing country is basic research leading to the development of an indigenous development model to replace the "imported" model.

In theory, the provision of reliable information for evaluating economic performance is the task of a macroaccounting system. The aim of macroaccounting is ". . . to describe coherently, systematically and

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[10] Jan Tinbergen, *The Design of Development* (Baltimore, Md.: Johns Hopkins Press, 1958), p. 12.

[11] Sayed M. Nimeri, *Economic Planning in the Sudan* (in Arabic) (Khartoum: Khartoum University Press, 1978), pp. 15-16.

[12] R. M. Barkay, "National Accounting as a Planning Tool in Less Developed Countries: Lessons of Experience," *Review of Income and Wealth* (December 1975): 351.

[13] Kamarck, "Economic Performance," p. 159.

quantitatively the structure of an economy" over a certain period of time.[14] Most developing countries have adopted, as a macroaccounting system, the United Nations' System of National Accounts (SNA). Although SNA

> is a very complete and logical construct, it was largely developed for the most industrialized nations and, in that sense, it is incompatible with the specific environments of the developing countries that adopted it. Furthermore, its implementation ignored the quite deficient state of basic data and the amount of resources needed to implement the system.[15]

Developing countries represent a heterogeneous group and, as such, vary widely in terms of the stages of social and economic development achieved, endowment with regard to natural and human resources, economic and social structures, attitudes, and planning policies.[16] Most developing countries are characterized by mixed economies that vary widely in terms of the economic motivation for production, consumption, and so on. Furthermore, economies of developing countries are characterized by dualism or pluralism where a modern sector and a traditional sector exist side by side.[17] SNA does not capture such significant variations since it is built around certain economic constructs that are alien to developing countries, and its major emphasis is on international standardization of national accounts. It becomes apparent that a macroaccounting system should be tailored to the specific needs and requirements of the particular developing country. As Barkay correctly noted, ". . . the pursuit of a suitable accounting system is not a ballet dance: what matters is not the inherent beauty of the posture but whether or not the system assists in generating dynamic results."[18]

A FRAMEWORK FOR A LINKAGE BETWEEN MICROACCOUNTING AND MACROACCOUNTING

In what follows, a framework is offered with the objective of providing a logical basis for establishing an effective linkage between microaccounting and macroaccounting for developmental planning purposes.

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[14] Enthoven, *Accountancy,* p. 66.

[15] Frank M. Orlando, "Commentary on Macro and Micro Accounting for Economic Development," *Papers and Commentaries from the International Seminar on Accounting in Economic Growth and Development,* School of Business Administration, University of South Carolina (Chapel Hill: University of South Carolina, 1976), p. 68.

[16] Barkay, "National Accounting," p. 359.

[17] M. Mukherjee, U. D. R. Choudhury, and D. S. Rao, "Economic Accounts for Developing Countries," *Review of Income and Wealth* (December 1975): 412.

[18] Barkay, "National Accounting," p. 362.

In this framework, macroaccounting and development planning can be envisaged as two interrelated systems where the information outputs of the former become part of the information inputs to the latter.[19] Furthermore, both systems can be classified as open systems, and both are also under human control. An open system is a system type capable of adapting to changes in its environment in such a way as to continue its existence. An open system is self-organizing and changes its organization in response to changes in its environment. An important requirement for achieving adaptive capability is feedback information. The major function of feedback information is to control the system's output. Output can, therefore, be considered a focal point in controlling a system's operations.[20] This makes feedback information crucial to the proper functioning of both systems. A feedback loop between the two systems is a focal point in the relationship between them (see exhibit 1). Such a feedback loop would have the following advantages:

1. The preparers of the macroaccounting information would be able to keep track of the changing information needs of the development planning process.
2. The development planners would be able to indicate to the preparers of the macroaccounting information, through negative or positive feedback information, the effectiveness of the information provided in aiding the development planning process. This would, in turn, enable the macroaccounting system to adjust its operations in order to serve the development planning process better.
3. The macroaccounting system would be able to provide negative or positive feedback information to the development planners regarding the progress being made in achieving the objectives of the development plan. This would in turn enable the development planners to revise the development plan, on a timely basis, whenever it is necessary.
4. The developing country would have development planning and macroaccounting systems that are complementary to each other rather than having each system operating in a vacuum. This would save the particular developing country the cost of implementing and later scrubbing development strategies or policies that were ultimately found to have been formulated on the basis of unreliable information.

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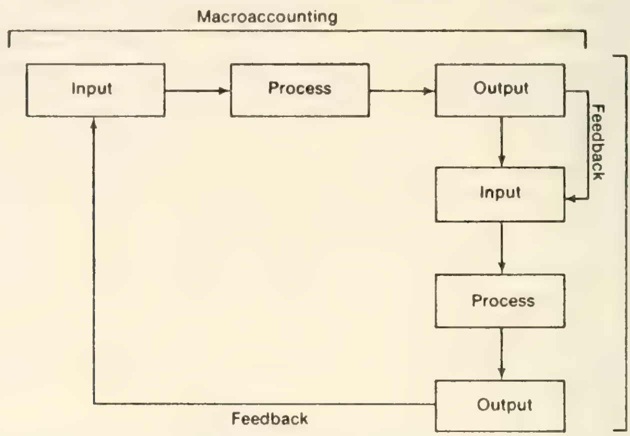
[19] Mohamed A. Mirghani, "The Role of Accounting in the Economic Development of Developing Countries: The Case of the Sudan" (Ph.D. Dissertation, Indiana University, 1979), p. 112.
[20] Gordon B. Davis, *Management Information Systems: Conceptual Foundations, Structure, and Development* (New York: McGraw-Hill, 1974), p. 88.

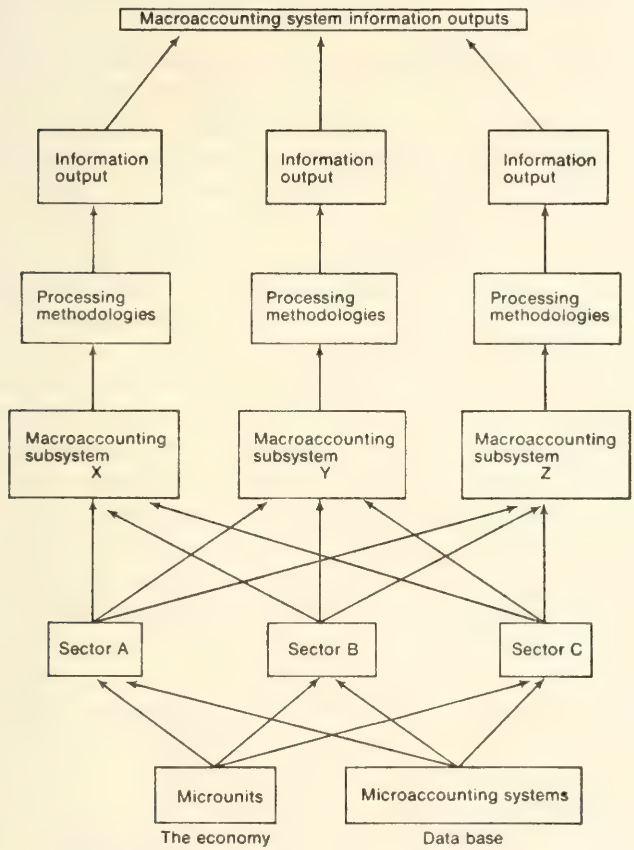
Exhibit 1. Macroaccounting and Development Planning as Two Interrelated Systems



For a macroaccounting system to satisfy the information needs of evaluating a country's economic performance, the dimensions along which such an evaluation will be based should be identified. Such dimensions would be different from one country to the other and mainly relate to the structure and characteristics of the particular economy. On the basis of such identification, the information variables for evaluating performance along each identified dimension must be specified. Furthermore, the qualitative characteristics of the specified information variables must be agreed upon. The qualitative characteristics of any information variable can be regarded as the basic attributes that would make its usage reliable in a decision situation. The specified information variables and their respective qualitative characteristics would then act as the determinants of the desired information outputs of the macroaccounting system for the purpose of evaluating the economy's performance.

The capability of the macroaccounting system to produce its desired information outputs with certain qualitative characteristics will be dependent upon its structure. The structure of the macroaccounting system is comprised of its method of classification, processing methodologies, and data base (see Exhibit 2). The method of classification should involve the following: (1) classifying the micro units comprising the economy into major economic sectors. The major steps in this process are defining the major economic sectors, and developing

Exhibit 2. The Structure of the Macroaccounting System



proper criteria for the inclusion of micro units into the defined economic sectors; (2) classifying the macroaccounting system into accounts or subsystems in which each will be responsible for producing a certain information output; and (3) classifying the economic transactions of each economic sector into the input data for each subsystem of the macroaccounting system.

Following the completion of the macroaccounting system's method of classification, methodologies for processing input data into the desired information outputs with their respective qualitative characteristics should be determined. In processing input data into the desired information outputs, special consideration must be given to (1) the

extent to which input data can be aggregated without a significant loss of information. In other words, in aggregating a battery of data sets ($X_1 \ldots\ldots X_n$) into a single index or information variable (Y), the basic underlying relationships between these data sets should be preserved as much as possible in order to avoid any significant loss in the information content of Y; and (2) achieving homogeneity of the input data coming from micro units, within the same industry or economic sector, that employ different production functions. Assume that the micro units that comprise a certain industry employ either labor-intensive or capital-intensive production functions in the production of their outputs. If an index for measuring overall productivity in that industry is desired, how can the difference in productivity resulting from differences in production functions be captured?

Since microaccounting is primarily concerned with measuring and reporting the results of the economic activities of the micro units comprising the major sectors of an economy, it follows, at least conceptually, that it constitutes an important part of the data base for the macroaccounting system.[21] In reality, the accounting measurements performed at the micro level are made for purposes other than supplying the input data necessary for a properly functioning macroaccounting system.[22] It is, therefore, essential that a certain degree of compatibility should exist between measurements of microaccounting and those that are necessary for producing the input data of the desired information outputs of the macroaccounting system. Microaccounting would provide an effective data base for macroaccounting if the following factors prevail:

1. An agreement between microaccounting and macroaccounting regarding the definitions, the measurement base, the unit of measurement, and the basis of accounting, of the input data necessary for obtaining information of certain economic constructs that would be needed for evaluating the country's economic performance or for monitoring the progress of a development plan. Such issues can only be resolved through basic research undertaken with the objective of identifying the information needs of a developing country's develop-

[21] American Accounting Association, Committee on International Accounting Operations and Education, 1976-1978 *Accounting Education and the Third World* (AAA, 1978), p. 9; and Nancy and Richard Ruggles, "The Evolution and Present State of National Economic Accounting," *International Journal of Accounting* (Fall 1968): 16.

[22] C. S. Yu, "Microaccounting and Macroaccounting," *Accounting Review* (January 1966): 13-14.

ment planning process in view of its specific social and economic environments.

2. An agreement between microaccounting and macroaccounting regarding the qualitative characteristics, classifications, and degree of detail of microaccounting data for macroaccounting purposes. Basic research focusing on the accountancy function of a particular developing country can possibly provide answers to such questions.

3. An awareness by accountants, at the micro level, that the accounting measurements they perform could have a significant impact upon policy making at the macro level. Such an awareness is necessary for inducing accountants to broaden the scope of their accounting work and to accept the challenge of their new role in the development process. The creation of such an awareness is dependent to a great extent on the development of accounting education in developing countries. The answer would be in the form of model accounting curricula that are intended to train the human resources necessary for helping a developing country have an accountancy function compatible with its own economic and social environments.

4. An awareness by managements of micro units of the application of certain macro aggregates in planning and controlling their operations effectively. Such an awareness is necessary for creating the support needed for the creation of microaccounting systems that are compatible with the needed macroaccounting system. The creation of such an awareness is closely related to the development of the managerial and entrepreneurial skills in developing countries. Such an awareness would depend upon the design of business education and executive development programs that are also compatible with the particular developing country's specific social and economic environments.

The foregoing recommendations are intended to emphasize to the developing countries considering or currently seeking the development of accounting for developmental or economic management purposes that such a development must be specifically tailored to their own informational needs and must result in an accountancy function compatible with their own economic and social structures.[23] In other words, it will be a mistake if a developing country blindly adopts an accounting system of a certain developed country rather than focusing on assessing their own information needs in order to provide a sound basis for the creation of an indigenous accountancy function.

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[23] Richard J. Briston, "The Evolution of Accounting in Developing Countries," *International Journal of Accounting* (Fall 1978): 109.

CONCLUSIONS

Establishing a strong linkage between microaccounting and macroaccounting for development planning purposes in developing countries represents a long-term objective attainable only in the distant future. This makes it necessary to identify and rank order a number of short-term objectives that would lead to the attainment of the alluded to long-term objective. The most important short-term objective that should be pursued in the immediate future is research leading to the identification of development models that are compatible with the unique economic and social structures of developing countries. Then research leading to the design of macroaccounting systems capable of generating reliable information for the selected development models should be undertaken. Only after undertaking these types of research would research attempts to establish a linkage between microaccounting and macroaccounting become fruitful. Then the details of the linkage between microaccounting and macroaccounting can be determined and would provide a sound basis for the design of model curricula for accounting and business education in developing countries.

Making those at the helm in developing countries aware of the indispensable role of reliable information in effective and efficient economic management is vital if accounting is to assume its proper role in the development process. Without such an awareness, economic development would become more distant and more costly to achieve.

Finally, developing countries cannot afford to wait for accounting to evolve as it has in developed countries because the influences that shaped accounting in the developed countries are unlikely to occur in developing countries by the same degree. Instead, a carefully designed strategy for the development of accounting as an effective tool for the economic development process must be adopted by each developing country in view of its own specific environment.

Accounting Standards in Developing Countries

J. M. SAMUELS and J. C. OLIGA*

INTRODUCTION

In contemporary accounting thought and practice, the problem of harmonization of accounting standards has progressively become more politically intricate, theoretically complex, and operationally uncertain, yet the drive for uniformity seems to continue unabated. This appears to be true at both the domestic and international levels of concern, but in the latter case, the drive for harmonization of accounting principles and practices in developing countries with those in the rest of the world seems to present conceptual and practical problems of far wider dimensions. In this paper, the authors question the rationale and the desirability of "broadening" the so-called international accounting standards to encompass the Third World.

The paper argues that where economic, sociopolitical, cultural, and contextual differences between countries, nations, or societies exist, the problem of appropriate accounting standards will assume a different conceptual meaning as well as contextual significance. The paper further argues, in the case of developing countries where such differences tend to be not only highly pronounced, but also in a highly dynamic and fluid state, the relevance of international accounting standards becomes even more questionable. The paper illustrates these arguments with a brief historical case study of one developing country (Egypt) in terms of dramatic politicoeconomic changes spanning the 100 years between 1882 and 1981.

Thus, this paper is concerned with two aspects of international ac-

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counting, namely the comparative research and the attempts at harmonization of accounting standards. The comparative international accounting literature suggests that it is possible to group countries together on the basis of their accounting practices.[1] Countries can thus be grouped into clusters, and within each cluster, it is assumed that there is much in common in the accounting system. In the future, the number of groupings would be expected to fall, thereby further facilitating harmonization.

There are now more than forty countries which are members of the International Accounting Standards Committee (IASC) and which supposedly work together toward the international harmonization of accounting standards. The International Federation of Accountants (IFAC), which also wishes to harmonize standards, works closely with IASC, and there are proposals that beginning in 1982, the two bodies are to formalize their working relationship. This means that from 1984, the membership of the bodies would be identical, comprising professional accounting associations in over sixty countries.[2] If the proposals are accepted, IFAC will undertake to support the adoption of international accounting standards, with each of its members bringing pressure to bear on their respective governments and business communities to adopt such standards.

In the next section, the paper briefly examines the motives underlying the quest for international harmonization. Extension and international legitimation of certain accounting practices and standards rather than harmonization would seem to be the essence of the exercise. In the next section, the authors will introduce an analytical framework for discussing issues of harmonization. In the next section, the problems of harmonization at the theoretical level will be discussed, while similar problems at the contextual level are the subject of the next section. The final section refers both to the arguments in the paper and the illustrative insights for the Egyptian case study.

HARMONIZATION OR INTERNATIONAL LEGITIMATION AND EXTENSION OF CURRENTLY DOMINANT PRACTICES?

Although all the parties striving for a greater degree of international

[1] R. C. Da Costa, J. C. Bourgeois, and W. M. Lawson, "A Classification of International Financial Accounting Practices," *International Journal of Accounting* (Spring 1978): 73-85; W. G. Frank, "An Empirical Analysis of International Accounting Principles," *Journal of Accounting Research* (Autumn 1979): 593-605; and R. D. Nair and W. G. Frank, "The Impact of Disclosure and Measurement Practices on International Accounting Classification," *Accounting Review* (July 1980): 426-50.

[2] "Arms Linked for Mexico '82," *Accountancy* (August 1981).

harmonization of accounting standards implicitly hold the same assumption that such an objective is globally desirable, they may do so for very different reasons. Those organizations, national or international, which are active in setting accounting standards see worldwide harmonization as essentially a means to achieve compatibility in the financial reporting of international companies.[3] Professional accounting bodies seem to be motivated more by the need to maintain standards of professional ethics and credibility, with issues of consistency and reliability especially significant. The international business community sees harmonization as a means to facilitate international trade and business, especially in the areas of capital flows,[4] and reliability of information as a basis for foreign investment decision making.[5] Others see harmonization as an integrative device for bringing about a unified business environment (for example, the European Economic Community). The United Nations has been interested in harmonization, partly for evaluative purposes with regard to the impact of multinational companies' operations on developing countries. Individuals and certain interest groups, including those in developing countries, have perhaps supported the international harmonization efforts for reasons not excluding enhancement of personal or group interests and status. However, whatever the real motives underlying support for harmonization, such support is usually rationalized in terms of greater international understanding and better economic efficiency in the allocation of scarce resources, including avoidance of duplication in the cost of producing accounting reports.

Although the present authors believe that these efforts at international harmonization are for the most part well intentioned, they nonetheless see them as misguided insofar as developing countries are concerned. An examination of the sources of existing accounting systems in most developing countries reveals that those systems were for the most part either imposed by powerful foreign investors or extended from the home to the host countries through the influence of multinational companies, foreign aid, and education. As Wilkinson[6] argues,

> The accounting principles of one country have never been "sold" to another country on the basis of convincing arguments in support of those principles.

[3] Ernst & Whinney, International Accounting Standards, 1981.

[4] S. M. Farag, "The Problem of Performance Evaluation in International Accounting," *International Journal of Accounting* (Fall 1974): 45-53.

[5] Belverd E. Needles, Jr., "Implementing a Framework for the International Transfer of Accounting Technology," *International Journal of Accounting* (Fall 1976): 47-62.

[6] T. L. Wilkinson, "United States Accounts as Viewed by Accountants of Other Countries," *International Journal of Accounting* (Fall 1965): 11-12.

Accounting principles of one country have moved to another country when two conditions have existed:

1. The second country had no organized body of accounting principles in the first place and
2. Large amounts of capital from the first country were invested in business in the second country, with the consequent ability on the part of those investors to impose their own accounting requirements on the businesses.

Briston[7] has similarly noted that in Indonesia, as a result of the influence of multinational companies, international firms of accountants, and U.S. aid, university accounting courses became strongly biased toward American texts. He also noted that the Indonesian Institute of Accountants adopted a set of accounting and auditing standards which were virtually identical to those of the American Institute of Certified Public Accountants. No doubt more examples could be cited, but the point is that most developing countries had little chance to evolve accounting systems which truly reflected the needs and circumstances of their own societies. Their existing systems are largely extensions of those in developed countries. In this light, the benefits of their being more deeply integrated into systems that predominantly suit developed countries becomes questionable. For the Third World, international harmonization may do more harm than good if it preempts the possibility of changing the old, inappropriate systems and evolving new ones which are better suited to their development needs. Furthermore, given that Anglo-American accounting principles and practices currently dominate the attempts at harmonization,[8] the attempt becomes largely a one-sided exercise, and "international" standards essentially represent internationalization of domestic standards of dominant members of the standard-setting bodies.[9] This paper will not pursue the question of Anglo-Saxon dominance in accounting thought even in the Western world itself; rather, the authors see it as evidence of the more severe imbalance of power between developing countries and such dominance, in the process of negotiating for "international

[7] R. J. Briston, "The Evolution of Accounting in Developing Countries," *International Journal of Accounting* (Fall 1978): 105-20.

[8] Gerhard G. Mueller, "Accounting Principles Generally Accepted in the United States versus Those Generally Accepted Elsewhere," *International Journal of Accounting* (Spring 1968): 91-103; R. C. Laughlin and A. G. Puxty, "On the Construction of International and Domestic Accounting Principles: A Cross-Cultural Research Model" (University of Sheffield Discussion Paper No. 81.2, 1981); and Desmond McComb, "International Harmonization: Myth or Ideal?" (Paper presented at the Fourth Annual Conference of the European Accounting Association, Barcelona, April 1981).

[9] Laughlin and Puxty, "Accounting Principles," and McComb, "International Harmonization."

harmonization." International standard-setting process thus becomes a means of legitimating worldwide certain values, accounting principles, and practices which may or may not be appropriate to other countries or societies. This problem is essentially entailed in one's view of the nature of accounting and its relationship to its environment. It is this problem to which we now turn.

PURPOSE OF ACCOUNTING AND THE NATURE OF ITS SUBJECT MATTER: METATHEORETICAL ISSUES

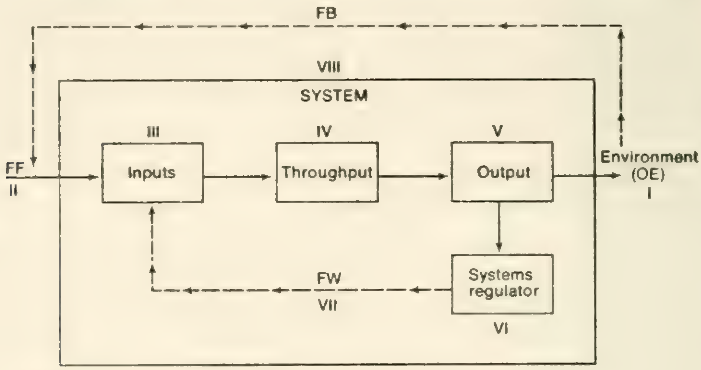
Using a system approach, we can represent accounting as a system (with inputs, throughput, and outputs) interacting with its environment. The system takes its inputs from the environment and transforms them into outputs which go back to the environment.[10] The most immediate environment of an accounting system is, of course, the organization of which it is part. If viewed as essentially embedded in the organization, however, the accounting system's relevant environment becomes the same as that of the organization itself, the latter now becoming the focal system interacting with its environment. Exhibit 1 represents these ideas.

Exhibit 1 is a model of a typical accounting system, where part of the output goes to the external environment (I) as external financial reports and therefore concerns issues of disclosure requirements. The second part of the output is internal to the organization and is mainly intended for management(VI). Evaluation of the degree of organizational effectiveness being achieved is feedback to the system (VIII), while a similar position within the system is shown as representing feedwithin inputs (VII). The purpose of the outputs (at I and VI) dictates the type of inputs that are necessary to achieve those outputs (that is, feedforward inputs at II, feedwithin inputs at VII, and feedback inputs at VIII). The transformation process at IV and the resultant outputs (V) are a consequence of the given purpose of the outputs and the type of inputs selected from the environment.

Exhibit 1 thus illustrates that for any purposive system, the question of *why* the system is in existence (or came to being) is logically prior to *what* the system should be doing; the latter is logically prior to *how* the system should be conducting its activities within a given context. Put differently, the *purpose* (or objectives) of the system logically implies the *problems* to be addressed and hence the *solutions* that are deemed appropriate within a given *context*. This logical hierarchy can

[10] Van Court Hare, *Systems Analysis: A Diagnostic Approach* (New York: Harcourt, Brace & World, 1967); and G. Klir, *An Approach to General Systems Theory* (New York: Van Nostrand Reinhold, 1969).

Exhibit 1. Accounting as a System and Its Environment



FF = Feedforward inputs

FW = Feedwithin inputs

FB = Feedback inputs

OE = Organizational effectiveness

I = Represents the "Why?" issues in accounting

II, III, VII, and VIII = Represent the "What?" issues in accounting measurement

IV and V = Represent the "How?" issues in accounting measurement

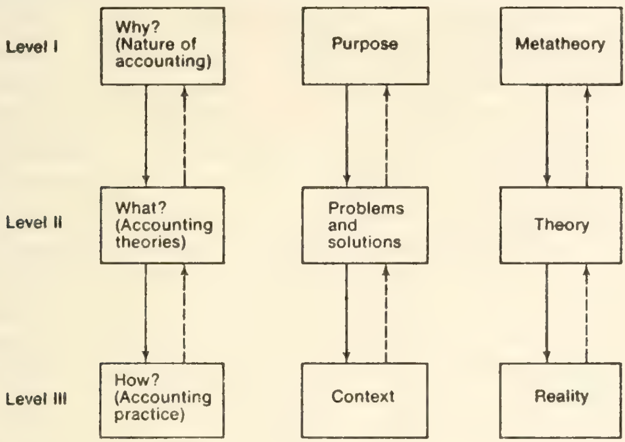
VI = Represents the dynamic management of the relationship between "Why?" "What?" and "How?"

be represented in terms of *metatheory,* concerned with fundamental issues of purpose; *theory,* concerned with issues of problems and their solutions; and *reality,* defining the contextual setting.[11] Exhibit 2 represents the essential isomorphisms between these logical hierarchies, including the feedback (represented by dashed arrows) between the three levels. As we shall argue in subsequent sections, it is this kind of basic analytical framework that should underscore discussions concerning the accounting problem: the search for an "agreed" conceptual framework for accounting standards setting[12] capable of encompassing

[11] E. A. Lowe and A. M. Tinker, "An Educational Design for 'Shifting' Degenerate Social Science Paradigms: An Application of General Systems Theory," *International Journal of General Systems,* vol. 2 (1976): 231-37.

[12] Financial Accounting Standards Board, Statement of Financial Accounting Concepts No. 1, *Objectives of Financial Reporting by Business Enterprises* (Stamford, Conn.: FASB, 1978); R. MacVe, *The Possibilities for Developing an Agreed Conceptual Framework for Setting Accounting Standards: Preliminary Report* (London: Institute of Chartered Accountants in England and Wales, 1979); McComb, "International Harmonization," pp. 4-5; and Laughlin and Puxty, "Accounting Principles," p. 16.

Exhibit 2. The Accounting Problem: An Analytical Framework



all issues relating to the three levels of (logical) hierarchy is, as we shall argue, highly misdirected.[13]

We now turn to an elaboration of the issues at the metatheoretical level; issues relating to the theoretical and empirical levels of analysis will be briefly examined later. Accounting, in common with all scientific inquiry, is concerned essentially with the search for and generation of knowledge or claims to knowledge about the world. Not every inquiry, however, can claim to produce valid knowledge. To evaluate the validity of inquiry activities and the status of the resultant knowledge claims, one should examine the underlying theories and presuppositions concerning the nature of proper inquiry. This evaluative task defines the essence of epistemological and ontological disciplines. Epistemology addresses the question of the nature and possibility of knowledge, truth, and reason. Ontology relates to a conception of the nature of the subject matter under inquiry and the fundamental views

[13] A. M. Tinker, "Towards a Political Economy of Accounting: An Empirical Illustration of the Cambridge Controversies," *Accounting, Organisations and Society*, vol. 5, no. 1 (1980); and J. Habermas, *Communication and the Evolution of Society* (London: Heinemann, 1979). The present authors believe that the only way in which an "agreed" conceptual framework for standards setting could be reached would be via Habermas' theory of "communicative competence" which postulates that moral judgments can be made on the basis of a rational consensus predicated on critical argumentation by "free" parties seeking to satisfy their emancipatory interests.

concerning the capacities of human beings as knowing subjects. Epistemological and ontological theories can therefore be considered as fundamental presuppositions (or philosophical doctrines) from which empirical sciences (or theories) derive their justification.[14] Relating this to the analytical framework in exhibit 2, it can be seen that epistemology and ontology correspond to the level of metatheories. At that level of analysis, we would be concerned with questions regarding the epistemic status of accounting knowledge and the ontological nature of the subject matter for accounting thought and inquiry. The very issues of knowledge and the objective conditions for that knowledge, however, entail questions of the knower's (subject's) set of values and beliefs since it can be argued that ultimately the aim of all empirical science is the improvement of the control by man and society over their physical and social environment.[15] There is thus a dialectical relationship between metatheory and theory in that metatheory presupposes theory or objective conditions in which control can be realized, and theory presupposes metatheory as the source of its justification in terms of basic, subjective values, and beliefs,[16] even if one is logically prior to the other.

Relating this discussion to the accounting problem, two related issues immediately arise: first, there is the question of what the epistemic nature of accounting knowledge is, and second, there is the question of what the ontological nature of the subject matter of accounting is. A full discussion of these issues is beyond the scope of this paper; it is not necessary for our argument against the uncritical approach to international harmonization of accounting standards. The purpose of raising the two questions is rather to point to the variety of epistemological and ontological positions that are possible and thereby demonstrate that harmonization of standards at the levels of theory and practice, based as it is on an implicit assumption of a consensus at the metatheory level, is misguided right from its most fundamental level.

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[14] For this view of epistemology and ontology, see D. Beyleveld, "Epistemological Foundations of Sociological Theory: An Examination of Recent Critiques of 'Positivism'" (Ph.D. Dissertation, University of East Anglia, 1975).

[15] N. Weiner, *The Human Use of Human Beings* (Boston: Houghton Mifflin, 1950); and Lowe and Tinker, "General Systems Theory."

[16] For this line of argument based on dialectical phenomenology, see R. W. Bologh, *Dialectrical Phenomenology* (London: Routledge & Kegan Paul, 1979); see also E. A. Lowe and J. C. Oliga, "Perceived Uncertainty and Organizational Control: A Pluralist Dialectical Approach to the Modeling of Human Systems" (Proceedings of the International Conference on Systems Methodology and the 26th Annual Meeting of the Society for General Systems Research, Washington, D.C., January 1982), pp. 987-94.

Two polar cases and a "middle-of-the-road" position can be used to illustrate the potential variety both in epistemologies[17] and ontologies.[18] Positivism as a polar case illustrates objectivist epistemologies, which assume that the sense of an object is inherent in that object and hence independent of any relation to a knowing subject. Under this position, the nature of accounting reduces to a mere "technology" or "technical" issues. Such a position would emphasize, *inter alia,* objectivity, verifiability, reliability, and neutrality in accounting knowledge (or information). Idealism as a polar case illustrates subjectivist epistemologies, which assume that reality is whatever mental concepts the mind calls forth. Under this position, accounting knowledge would be conceived more in terms of subjective judgment (with emphasis being generally on relevance of information for decision making). Realism has been used to describe the middle-of-the-road position,[19] which recognizes the unity of subject and object, the unity of thought, and experience. Under this position, the importance of both subjective and objective aspects of accounting knowledge is recognized.

The variety of ontological positions can be illustrated by reference to individualism and holism as polar cases, with systemism as the middle-of-the-road position. In accounting terms, individualism would represent the position where the subject matter of accounting is seen solely in terms of individual users or user-groups (for example, shareholders, lenders, creditors, and so on). Holism would represent the position where the identity of individual users or user groups is entirely lost, with only the organization being recognized; it is an extreme reification of the organization. Systemism would represent recognition of the systemic nature of the relationship between the organization and its participants, the reality of the organization together with its emergent properties being as well recognized as the reality of its participants.

Some important implications derive from the discussions in this section. First, the definition of the nature of accounting as well as that of its subject matter derives from the epistemological and ontological positions one takes. The purpose of accounting is only meaningful in terms of those definitions. Because of the variety of conceptions, values, and beliefs possible at the metatheoretical level, international harmonization of accounting standards (at the levels of theory and practice) is fundamentally misguided by making an implicit assumption that

[17] Bologh, *Dialectical Phenomenology.*

[18] M. Bunge, "A Systems Concept of Society: Beyond Individualism and Holism," *General Systems* (24): 27-44.

[19] Bologh, *Dialectical Phenomenology.*

consensus obtains regarding the nature of accounting and that of its subject matter. Second, because values and beliefs are entailed essentially in any attempt to define or conceive of accounting, accounting cannot be value free. That accounting, as a social science, cannot be value free is being increasingly recognized in the literature.[20] Accounting information or knowledge cannot but be value laden since by being humanly determined as an empirical belief, it presupposes and entails the inquirer's value systems.[21]

It is also being increasingly recognized in the literature that accounting is necessarily grounded in societal need and that in fulfilling such need, it acts as a mechanism for social control.[22] At a general level, the function of accounting can therefore be defined in terms of social control. Even if all were agreed on such a definition, however, it would not follow that an "agreed" conceptual framework would emerge since such a definition would still leave open issues, such as control for what and by whom, how, and in whose interest? These are fundamental and formidable questions relating back to epistemologies and ontologies that one adopts. It is in this context that we argue that attempts at worldwide harmonization face politically intractable problems at the metatheoretical level. In the next section, attention is focused on the theoretical implications of this quandry to the case of developing countries.

INTERNATIONAL HARMONIZATION IN DEVELOPING COUNTRIES: A CRITIQUE AT THE THEORETICAL LEVEL

In presenting alternative epistemological and ontological positions in the preceding section, we did not imply a relativistic basis of choice among them.[23] Rather, we wished to emphasize that a particular position is presupposed in the very act of engaging in any normative,

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[20] E. A. Lowe, A. G. Puxty, and A. M. Tinker, "Improving the Accounting Function for Society: Proposals for GST-Based Newcomer to Social Science," in *Proceedings of the Fifth European Meeting on Cybernetics and Systems Research,* ed. R. Trappl (Hemisphere, 1979).

[21] A. Kaplan, *The Conduct of Inquiry* (Intertext Books, 1973); and W. F. Soo, J. C. Oliga, and A. G. Puxty, *The Population Ecology Model and Managerial Action, A Review Study of Organizations and Environments, J. Enterprise Management,* vol. 2 no. 3 (1980): 317-25.

[22] American Accounting Association, *Accounting Review,* supplement to vol. 52 (1977); E. A. Lowe and A. M. Tinker, "Siting the Accounting Problematic," *Journal of Business Finance and Accounting* (Autumn 1977):263-76; and A. G. Puxty, J. C. Oliga, and W. F. Chua, "Accounting and Western Imperialism in the Third World" (Paper presented to the Fourth Annual Conference of the European Accounting Association, Barcelona, 1981).

[23] Habermas, *Communication.*

theoretical discourse. Thus, our critique in this section necessarily entails a particular value stance.

In December 1980, Egypt, a developing country, considered adopting international accounting standards. The Syndicate of Commerce Professions held an international accounting conference under the auspices of President Anwar Sadat, which led to a recommendation that Egypt adopt international standards.[24] This is what many people in the West would like to see, since it would help to harmonize accounting standards. However, is it in Egypt's best interests?

One of the objects of the formation of IASC was to harmonize, as far as possible, the diverse accounting standards and accounting policies presently in use in different countries. The main reason for this was said to be due to the demands of international trade and business which require the application of an acceptable uniform code of accounting standards. Undoubtedly this is true; international trade and business does benefit if information, such as accounting information, is clearly understood by all users. But what is the situation within a developing country? One of the main objectives of corporate reports is to assist users to make economic decisions. International standards assist those making decisions at an international level, but within a developing country, it is not clear what information should be used as a basis for economic decision making. The information required might not be just that relating to financial costs and returns. The whole of the cost benefit literature emphasizes that economic decisions in a developing country should be based on a knowledge of shadow prices and shadow costs, on a knowledge of foreign currency flows, and on a knowledge of opportunity costs, based on world prices rather than domestic prices. This cost-benefit literature is not subversive literature designed to destroy the private sector of an economy. The most widely used manuals on the subject are those produced by the World Bank and the United Nations, both very much supporters of the private enterprise system.

As accountants, we do say that "the basic objective of financial statements is to provide information useful for making economic decisions."[25] When accountants speak of economic decisions, however, they are defining economic decisions very narrowly. The harmonization of standards may be helpful to those groups in society who base eco-

[24] R. J. Briston and A. A. El-Ashker, "The Egyptian Accounting System — A Case Study in Western Influence" (Copies available from the University of East Anglia, England).

[25] American Institute of Certified Public Accountants, *Objectives of Financial Statements* (New York: AICPA, 1973).

nomic decisions on just the financial analysis. The objectives of IAS state, "The accounting profession cannot normally impose its views except upon its own members and the task therefore is to persuade by example, leadership, and exhortation, the classes of persons referred to . . . to support the standards,"[26] the persons referred to being "governments, the authorities controlling securities markets and the industrial and business community that published accounts." According to the guidance being given by the World Bank and the United Nations, governments should base their economic decisions on more information than that which would be provided by accounts conforming to international standards.

It might be argued that this paper is confusing decision making at the public and private levels, but this is not the case. In most developing countries, the public sector is very large and dominates the economy. Accountants cannot, therefore, ignore the requirements for economic decision making within that sector. The accounting profession in the United Kingdom has been criticized for not sufficiently concerning itself with the accountability of the public sector. Perhaps the differences in this respect between the developed and the developing countries are not so great. In the developing countries, the private sector must justify its existence; it must satisfy the government that it is contributing to economic development. The accounting reports required, therefore, from both the public and private sectors are not necessarily those that would just satisfy shareholders and bankers. The point here is that accounting professions in developing countries should try to assist in designing reporting systems that are the most useful for economic decision making within the country, rather than trying to persuade the country to adopt systems which are needed for international trade and business. It is possible the two can be developed simultaneously, but the latter should not be seen as a substitute for the former.

As Chetkovich has noted, accounting in each country should develop in a manner relevant to the society in which it exists.[27] He argues that an accounting objective study group is necessary for different countries. One country might benefit from the work of another, but this does not mean that the results of such studies in other countries will necessarily be similar to results reached in the United States, for example. The

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[26] International Accounting Standards Committee, *The Work and Purpose of the International Accounting Standards Committee* (IASC, 1975).

[27] Michael N. Chetkovich, "Unit in Establishing Accounting Standards," *International Journal of Accounting* (Fall 1972).

other countries will benefit from the experiences of the leading groups and hopefully avoid some of the problems. We must recognize that different environments will lead to different accounting objectives and, therefore, different standards. Chetkovich also mentions the strong influence of nationalism which limits effective communication and rejects the experience of others for the preferences of going it alone. He also notes the difficulty in developing countries where there is a lack of qualified accountants.

Accountants cannot argue that they are not interested in the impact that financial reports may have on governments or on the public at large; they cannot argue that they are reporting only to shareholders; they cannot argue that accounting standards are politically neutral. Horngren commented that "the setting of accounting standards is as much a product of political action as of flawless logic or empirical findings."[28] According to Solomons, "The setting of standards is a social decision."[29]

Unfortunately, therefore, accounting standards and accounting reports are not politically neutral. According to the American Accounting Association, "in practice as well as in theory, the social welfare impact of accounting reports apparently is recognized. Therefore it is no surprise that the Financial Accounting Standards Board is a political body."[30] The International Accounting Standards Committee is a political body; its standards are those appropriate for industrial countries with a large private sector and a well-developed capital market. The main users of accounting reports in such countries are the shareholders, analysts, bankers, and other businesses. Accounting reporting practices and standards are quite rightly designed to provide these users with the information they require.

There is no agreed theory of accounting, no commonly accepted conceptual framework. Accounting is not a neutral technology, recording all information required for the purposes of stewardship and the measurement of performance. The data that it is decided to record, and the way in which this is disclosed in accounting statements are based on what a society, or certain groups within that society, consider to be relevant to users' needs.

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[28] Charles T. Horngren, "The Marketing of Accounting Standards," *Journal of Accountancy* (October 1973): 61-66.

[29] D. Solomons, "The Politicization of Accounting," *Journal of Accountancy* (November 1978).

[30] Robert G. May and Gary Sundem, "Research for Accounting Policy: An Overview," *Accounting Review* (October 1976):747-63.

It can be argued that in a developing country, different information from that required in a developed country should be disclosed. The problems are different; what are considered to be the important issues differ. International accounting standards are based on the needs of users in developed countries; therefore, they are not particularly relevant to the needs of Egypt and other less developed countries. In Egypt, it is necessary to be able to ascertain how the development strategies are working; how the regional policy is working; whether funds are flowing into or out of Egypt. Where accounts prepared according to international standards will serve the needs of the small number of private and foreign investors, these investors constitute only a very small part of the capital market in the country. In reporting its performance in Egypt, a company should provide information appropriate to the major issues of that society. The accounting numbers disclosed and the standards should result in data that are useful for economic decision making, and data that are needed for the social and political debates taking place within a country.

Accounting information is not politically neutral, and there is a danger that in encouraging developing countries to adopt international standards which are ideal for a set of social, religious, political, and economic circumstances different from their own, we may be doing more harm than good. We may be helping to destroy within the country the very economic system we are attempting to encourage. As accountants, we should be more interested in designing accounting systems that best suit the needs of a country than in designing systems to suit world trade. We should not let the tail wag the dog.

As Enthoven stated in 1973, if accounting "is to play a useful and effective role in society, [it] must not pursue independent goals. It must continue to serve the objectives of its economic environment."[31] He adds that we must not assume that what might be good accounting for the developed countries "will automatically be economically relevant and good for the emerging nations and the process of development." This should be borne in mind by the International Accounting Standards Committee who have as an objective "to promote the worldwide acceptance and observance" of its standards. It should also be remembered by those pressure groups in developing countries who would benefit from the adoption in their country of the international standards.

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[31] Adolph J. H. Enthoven, *Accountancy and Economic Development Policy* (Amsterdam: North Holland, 1973).

ACCOUNTING IN EGYPT: AN EMPIRICAL ILLUSTRATION OF THE HARMONIZATION UNCERTAINTIES IN DEVELOPING COUNTRIES

Accounting in Egypt

It has been claimed that bookkeeping existed in Egypt in 3000 B.C. The claim relates to bookkeeping, not the double-entry version. The Egyptian pharaohs had a form of internal control operating within their treasury.[32] The techniques could well have been taken to Egypt sometime between 5000 and 3000 B.C. by Indian traders. Sodhbans has claimed that bookkeeping existed in India at this earlier date.[33] India was then the center of a great trading empire that certainly embraced Egypt. The traders had a system of keeping records which could claim to be bookkeeping.

It is interesting, but perhaps no more than a coincidence, that double-entry bookkeeping did not appear in Italy until the Crusaders opened the Middle East to trade with the Italians, and "the latter began an acquaintance with the achievements of the Byzantine and Arab civilisations."[34] Islam moved into Egypt in 641 A.D., and Alexandria became the cultural and business center of a vast empire. From 1882 to 1956, the central political and business influence in the country came from the United Kingdom. The main social and cultural influence continued, however, to be Islam.

The U.K.'s political influence until 1956 meant that the organization of the accounting profession and the financial reporting practices in Egypt closely followed those of the United Kingdom.[35] The public sector was very small, with private ownership being the most important form of business activity. A stock exchange existed, having been formed in Alexandria in 1883, and in Cairo in 1890. The training of accountants, the law regulating companies, and disclosure standards were all based on those in the United Kingdom.

In 1956, following the invasion of Suez, the politics of the country completely changed. The new economic system required a different set of information from accountants. The changes required were so dramatic that the organization of the profession had to change. The

[32] Labib Aly El-Gammal claimed in a paper placed on the table at the International Accounting Conference held in Cairo in December 1980 that "the ancient Egyptians did bookkeeping. In particular it was claimed Amir Houtck was the first bookkeeper, . . . five thousand years ago."

[33] P. S. Sodhbans, "Regulations Affecting Accounting in India" (Proceedings of the Fifth International Congress of Accountants, Berlin, 1938).

[34] D. T. Bailey, "European Accounting History," in *International Accounting*, ed. H. Peter Holzer (in press).

[35] Committee on International Accounting, "Accounting Education and the Third World" (American Accounting Association, 1978).

Egyptians developed an accounting system of their own. A number of accounting control boards were created, each responsible for a different sector of the economy. Initially, each board tried to design an accounting system which it was hoped would best be able to measure the financial activities of that sector. However, this could have resulted in numerous different systems, and so in 1966, the Central Auditing Agency introduced a "uniform accounting system" which was to be followed by all publicly owned companies.[36]

During the 1970s, the position again changed dramatically. The Russians were asked to leave the country; slowly the influence of the private sector increased in importance. An open-door policy was introduced with foreign companies encouraged to invest in Egypt. New pressure groups developed. The professional accounting organizations grew in importance and stature. International accounting links were redeveloped. In the late 1970s and early 1980s, new political influences were felt in Egypt. In 1981, President Sadat was assassinated. Suddenly the move to a capitalist system based on Western ideas seemed threatened. Islamic ideas regarding banking and money had increased in importance in the Middle East. Attitudes toward Western ideas were changing. The future path of the Egyptian economy and consequently that of the accounting profession and accounting requirements in Egypt became uncertain again, proving that accountants do not control their environment; they respond to it.

Comparative Research

Of what use is the type of comparative international accounting research that attempts to classify countries on the basis of factor analysis? It is generally agreed that to understand any accounting system, one must consider the cultural, social, economic, legal, and religious systems of a country.

In the case of developed countries, these factors may be sufficiently stable to enable classifications to be made that are reasonably consistent over time, but, unfortunately, in the case of developing countries, changes in the environment can be frequent and dramatic and so reduce the significance of any attempt to categorize. Factor analysis looks at the situation at only one point of time; yet by definition, developing countries are changing and so should not be expected to remain for long within one grouping. In Egypt's situation, there could well be four different economic systems in twenty-five years, each

[36] B. Metwalli Amer, "Impact of Public Ownership on the UAR Accounting Profession," *International Journal of Accounting* (Spring 1969).

economic change being accompanied by social change. This illustrates the difficulty of using a classification of accounting systems to predict changes.

Mueller concluded in one of his pioneering papers on the subject that ten distinct sets of business environment existed.[37] One of the sets was "the developing nations of the Near and Far East." Egypt clearly comes within this set. Mueller describes the characteristics of this set:

> Modern concepts and ethics of business have predominantly Western origins. The concepts and ethics often clash with the basic oriental cultures.... Political scenes and currencies are most shaky. Major economic advances are probably impossible without substantial assistance from the industrialized countries.

Mueller draws attention to the instabilities within this set. It is because of such propensities to frequent and rapid changes over time that it is suggested that the recent interest in using cluster analysis in the international accounting area is highly misguided. Cluster analysis is a technique in search of an area of application: it is not a method for studying a problem and deciding what can usefully be said or done about it.

Accounting Standards

There are three stages in the standard-setting process in any country: political, production of the standards, and marketing of the standards. These stages will be briefly explained before the process at work in Egypt is described in detail.

First there is the political stage. The word *politics* is used here to mean "the relationship of men in society, especially relationships involving authority or power."[38] For instance, a pressure group within a country becomes active. It may be in the interests of this group to publish and have accepted generally accepted accounting principles. This pressure group may be responding to outside criticism of existing reporting methods, and they are therefore concerned to put their own house in order. They may be responding to changing economic and social conditions which result in new opportunities for members of the group.

With a group which would like to see the existence of standards hav-

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[37] Gerhard G. Mueller, "Accounting Principles Generally Accepted in the United States versus Those Generally Accepted Elsewhere," *International Journal of Accounting* (Spring 1968): 91-103.

[38] Collins, *English Dictionary* (1979).

ing emerged, the next stage in the process is the production of the standards. This can be an expensive and time-consuming process. The next stage is marketing, which involves the attempt by the accounting standard-setting body to ensure that its standards are acceptable to the more powerful groups in the society. These other groups would be interested in the standards, either as users or by being involved in their preparation in some way. Ushers would include politicans and different organs of the government.

As the reported information can and does affect human behavior, the items to be disclosed must meet with the approval of the most powerful groups in the society. The standards must therefore be acceptable to this group.

We will now trace the development of accounting standards in Egypt through these three stages. In regard to the political stage, as explained earlier in the paper, in 1956 Egypt began to move in the direction of being a centrally planned economy. Central planning has need for standardized data, and so a "uniform accounting system" was introduced affecting both public and private companies. With the "opening up" of the economy in the 1970s, international trade and international business assigned increasing importance. The accounting profession, responding to changing circumstances benefiting them, wished to improve reporting practices and saw the advantages in adopting international standards. A new stock exchange was to be introduced in Egypt, and accepted standards for external reporting would improve the allocation of resources through the exchange. The increasing collaboration with international audit firms and multinational business would be much easier if accounting reports could be based on the same principles and practices.

At a National Conference in Accounting and Auditing held in June 1980, the Syndicate of Commerce Professions, together with the Egyptian Society of Accountants and Auditors, proposed the formation of a committee, one of the purposes of which was to set accounting principles to be applied in Egypt in line with generally accepted international principles. At a subsequent international conference organized by the syndicate in December 1980, the conference confirmed the necessity for formulating accounting standards to be adopted in Egypt in the preparation of financial statements for external reporting. One recommendation was that

> the accounting standards should take into consideration the economic and accounting environment and needs in Egypt and should conform whenever

possible with the accounting standards published by the International Federation of Accountants which has admitted Egypt to its membership.[39]

This, then, shows the standard-setting process at work. A pressure group consisting of the syndicate, the Egyptian accounting professional body, and the Central Auditing Agency, among others, created a committee to formulate and publish accounting and auditing standards. The fact that they intended to adopt international standards meant that the production stage would not be time consuming. Unfortunately, in Egypt, 1981 turned out to be a year of upheaval which could be expected to interfere with the marketing stage.

In this section, the position of reporting practices and accounting standards in one country has been considered. This country case study illustrates two points: that it is dangerous to attempt to place countries into categories on the basis of the accounting system, and that the adoption of international accounting standards by developing countries may not only be irrelevant to the problems of the countries but may be harmful.

CONCLUSION

The drive for harmonization of accounting standards, both at domestic and international levels, is now a major preoccupation of bodies organized by governments (for example, United Nations, Organization for Economic Cooperation and Development, European Economic Community, and so on) and by independent professional accounting bodies (IFAC, IASC, and such). The unquestioned assumption underlying all these harmonization efforts is that uniformity of standards is both desirable and feasible. The present paper argues that there are both conceptual and practical problems that expose the futility of such an exercise, especially insofar as developing countries are concerned. At the metatheoretical level, there are intractable problems of differing values and beliefs as well as epistemological and ontological positions. This makes for little congruence in the definition of the nature of the subject matter of accounting as well as the nature and purpose of accounting itself. This is the very denial of the assumption of consensus at the metatheoretical level by the "harmonization school."

As Fantl has argued, "One of the chief and least recognized misconceptions which occurs in international accounting is the assumption

[39] Recommendations of International Conference on Accounting and Auditing, held in Cairo December 13-15, 1980. For a report on the conference, see M. Renshall, *World Accounting Report* (February 1981): 19-20.

that accounting objectives are uniform."[40] He makes the point that if we are going to achieve harmonization, we can only do so when all countries have the same objectives from the accounting systems.

Theoretical discussion regarding the inappropriateness of "internationally imposed" (or pseudoagreed) standards upon developing countries and the empirical illustration provided by the Egyptian case study would appear to show that, as regards developing countries, their "membership" in the "international harmonization club" seems misguided, if not harmful.

As is noted in the report of the AAA International Accounting and Auditing Standards Committee, "We observe that the task of setting international accounting standards is fraught with economic and political questions which have escaped the serious attention of scholars in accounting."[41] Unfortunately, much research is concerned with international accounting only as it applies to multinational companies. The international accounting standards are, however, meant to apply to companies within a country whether or not they are multinational. The paper has argued that we need to consider the accounting needs within a country, particularly the developing countries, not just the needs of the international business community.

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[40] Irving L. Fantl, "The Case against International Uniformity," *Management Accounting* (May 1971).

[41] International Accounting and Auditing Standards Committee, American Accounting Association, *Report* (1981).

Public Auditing Developments in the Arab States: A Comparative Study

NAIM H. DAHMASH*

INTRODUCTION

In recent years, the economic and social environment in developing countries has been changing rapidly as the result of increasing economic, social, and political pressures. To meet society's needs, governments in developing countries are undertaking many new development programs and expanding old programs in their efforts to relieve their various social and economic problems. "As a result of the active role played by the governments in the process of economic and social development, the size of the public sector has grown significantly and the public sector transactions have increased in their complexity."[1]

The increased governmental spending on various kinds of programs and activities in several areas has created tremendous problems in managing public resources in an economic and efficient manner. Such problem areas include (1) the organization of the economy in a planned manner, (2) the mobilization and allocation of all types of available resources, and (3) the formulation and implementation of development plans and programs.

The extensive and intensive utilization of economic planning as a means of achieving economic development in the Arab states has challenged the highest-level audit institutions in these countries to play

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[1] United Nations, *Government Accounting in Economic Development Management* (New York: U.N., 1977), p. 69.

a more active role in determining whether governmental expenditures are spent properly and wisely (economically). This fact necessitates a more effective control of governmental expenditures by strengthening the existing legal bodies that supervise such expenditures. Moreover, timely and accurate governmental financial information is needed for various parties, such as the governing bodies, the taxpayers, the investors, the creditors, and the general public.

Users, especially legislative bodies and the taxpayers, are highly interested in the spending aspects of public funds. They usually seek assurances that public resources have been spent for their intended purposes and that this was done in compliance with legal or other restrictions imposed on the government and in an efficient and effective manner.

> Users require information about the amount of spending for various programs, activities, and even items of expenditures. Importantly, the amount spent does not necessarily measure the quantity and quality of services provided, but it does permit rudimentary comparisons of one organization's service level and composition with that of another organization.[2]

GOVERNMENT ACCOUNTING AND AUDITING

The need for better information for national decision making required by the greater awareness of that need does challenge the objectives and precepts of governmental accounting and auditing. The high degree of financial involvement by contemporary governments has created a demand for sound systems and techniques of accounting essential for responsible and effective public administration.[3] Governmental accounting and auditing are complementary and interdependent processes. Government accounting deals with the collection, measurement (classification and valuation), processing, communication, control, and stewardship of the public sector.[4] Auditing is concerned with the evaluation of the economy, and the efficiency and effectiveness of government transactions.

Government accounting, an integral part of the public financial infrastructure, is an indispensable tool for management. It provides information for economic decision making in planning and budgeting and constitutes a basis for the control and management of various operational activities and their audits.[5]

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[2] Ernst & Ernst, *Accounting by Nonbusiness Organizations: FASB Discussion Memorandum* (August 1978), p. 13.
[3] United Nations, *Government Accounting,* p. 69.
[4] Ibid., p. 5.
[5] Ibid., p. iii.

THE NATURE OF THE PROBLEM

Government audits in the Arab states are initiated, as a rule, to review the performance of the individual governmental units responsible for a particular function, program, or activity. Most current audits are of the traditional type (financial and compliance). The auditors determine whether expenditures for different programs and activities were made for authorized purposes and in accordance with budget constraints, applicable laws, and regulations. Auditing procedures related to revenues are designed to determine whether all sources of public revenues have been realized and collected in compliance with existing laws and regulations.

The Committee on Relations with the General Accounting Office of the American Institute of Certified Public Accountants stated:

> Auditing is an important part of the accountability process since it provides independent judgment of the creditability of public officials' statements about the manner in which they have carried out their responsibilities. Auditing also can help decision makers improve the efficiency, economy, and effectiveness of governmental operations by identifying where improvements are needed.[6]

A new body of accounting and auditing literature is needed to offer well-developed ideas and sound solutions to the several challenging new areas in government accounting and auditing. There is a need today, as never before, for an exchange of professional ideas and experiences in government accounting and auditing. The more complex things are, the more difficult it is for management to obtain accurate information. The auditor's role has become more and more one of identifying opportunities for improvement in modernizing accounting and auditing systems and suggesting how program changes and management needs can be realized.[7]

In the section called "Worth Repeating" in *The International Journal of Government Auditing,* Professor Mackenzie stated, "Without audit, no accountability; without accountability, no control; and if there is no control, where is the seat of power?"[8]

The Arab states, as well as other developing countries, should adopt modern government auditing standards, techniques, and procedures to insure accountability of public funds, realiability of financial information, and credibility of financial reports. Moreover, auditors

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[6] American Institute of Certified Public Accountants, *Auditing Standards Established by the GAO, Their Meaning and Significance for CPAs* (New York: AICPA, 1973), p. 16.

[7] Elmer B. Staats, "The Increasing Importance of Internal Auditors in Today's World," *GAO Review* (Fall 1977):8.

[8] W. J. M. Mackenzie, "Worth Repeating," *International Journal of Government Auditing* (January 1974):16.

should determine whether government resources are being applied in an economic, efficient, and effective manner.

There seems to be a need for a study to evaluate the efficiency of the supreme audit institutions in the various Arab states.

PURPOSE AND SCOPE OF THE STUDY

This paper has two main purposes: first, to evaluate the existing supreme audit institutions and their effectiveness in sixteen Arab states (Algeria, Egypt, Iraq, Jordan, Kuwait, Lebanon, Libya, Morocco, Qatar, Saudi Arabia, Sudan, Somalia, Syria, Tunisia, Yemen Arab Republic, and Yemen Peoples Democratic Republic — data for Algeria were not available in many cases).[9] In addition, a comparative analysis of the various key issues will be made. These issues are (1) establishment of supreme audit institutions, (2) attachment of institution and independence, (3) organization and staffing, (4) functions and responsibilities, (5) types of auditing and sampling, (6) role of supreme audit institution as a consultative body, (7) implementing auditing recommendations, (8) reporting, (9) relationship with other financial control bodies, and (10) operational or performance auditing, and auditing procedures and standards applied for economic development programs.

Second, the paper will suggest appropriate ways which might improve the effectiveness of the present national audit institutions in the Arab states in order to play a more effective role in the process of auditing and evaluation of government units and development programs. Such recommended improvements are based on generally accepted auditing standards adopted by the U.S. Government Accounting Office (GAO). Special attention will be given to issues considered and recommendations made by the International Organization of Supreme Audit Institutions (INTOSAI) in the past nineteen years.[10] Moreover, the auditing standards adopted by the GAO were used as standard for the purpose of evaluation.

LIMITATIONS OF THE STUDY

In this study, the author did not investigate and analyze the means and methods of controlling the surplus funds in oil countries. The

[9] The Yemen Peoples Democratic Republic will be abbreviated as Yemen PDR.
[10] INTOSAI has held ten international congresses since 1953 to promote the exchange of ideas and experience in the field of public accounting and auditing among members. These meetings were held at the following places: Havana, 1953; Brussels, 1956; Rio de Janerio, 1959; Vienna, 1962; Jerusalem, 1965; Tokyo, 1968; Montreal, 1971; Madrid, 1974; Lima, 1977; and Nairobi, 1980.

reason was that in these countries, one of the basic problems of governmental auditing is the control of the allocation of the surplus in an efficient and effective way. The allocation of such funds might take two dimensions: (1) domestic (current and development spending) where, in this case, governments face the same control problems as other developing countries; and (2) international where governments, in this case, face different situations not existing in other developing countries with no surplus. Such problems will include the selection of the appropriate investment and the methods of controlling the investments.

As a result, these countries should have more effective techniques, sophisticated skills, and "know how" to control the allocation and the investment of funds. This area still needs more investigation and might be an appropriate topic for a separate study.

IMPORTANCE OF THE STUDY

In recent years, the governments of the Arab states have played an important role in the process of national economic and social development. Accordingly, government expenditures have grown significantly. Financial and compliance auditing alone is insufficient to provide the information needed for the measurement and evaluation of the different programs undertaken by the governmental units. To satisfy the different users' needs, it becomes clear that the Arab states must improve their governmental audit in accordance with generally accepted auditing standards. Moreover, in a majority of Arab states, the existing government auditing systems and techniques were conceived and installed during the pre-independence period, or before the advent of national development planning. Although some modifications have subsequently been made, the existing supreme audit institutions, and the prevailing audit systems, procedures, and standards are still inadequate to meet the required objectives of the auditing process.

Unfortunately, governmental accounting and auditing have not received the study and reform they need. Little attention has been given to sound governmental accounting, budgeting systems, and auditing procedures in the third world.[11]

> Government auditing today is a highly professional activity which should be performed by university educated, professionally qualified auditors competent to exercise due care and experienced judgment in diverse circumstances. The day of routine "desk" reviews of mathematical accuracy and legality is past.[12]

[11] United Nations, *Government Accounting*, p. 13.

[12] Luis Hidalgo, "Professional Government Auditing Standards," *International Journal of Government Auditing* (April 1977): 1.

At the first seminar for the Arab Supreme Audit Institutions held in Alexandria, February 12-16, 1977, the unanimous conclusion by all participants was that urgent public auditing reforms are required in the Arab world. Such reforms and generally accepted auditing standards are to be designed to maintain adequate professional proficiency needed for the auditing tasks in measuring the economy, efficiency, and effectiveness of government programs and activities.

This author believes that the present public auditing profession in the Arab states could be improved, and that more effective techniques could and should be applied to serve efficiently the needs of all users (legislative bodies, taxpayers, government officials, and others). Moreover, such improvements will create better understanding and sound evaluation of the government's programs and development plans.

This paper includes a comparative analysis of sixteen studies of supreme audit institutions in the Arab states.

ESTABLISHMENT AND DEVELOPMENT OF ARAB SUPREME AUDIT INSTITUTIONS

The creation and development of supreme audit institutions in the Arab states as independent and specialized entities were strongly connected with the political, economical, and administrative development stage in each country. Exhibit 1 indicates the year of establishment of the institutions in the sixteen countries of the present study, and the title of the organization, as well as the name of the legislation creating the supreme audit institution.

ORGANIZATIONAL ATTACHMENT OF SUPREME AUDIT INSTITUTIONS AND INDEPENDENCE

Organization laws pertaining to supreme audit institutions in the Arab states indicate that these institutions, except in Morocco, are independent entities. The degree of independence depends upon the organizational attachment that the unit has with the central governments. Attachment of these institutions may be classified as indicated in exhibit 2.

Immunity of supreme audit heads. The Arab states can be divided into three categories identified by the scope of immunity of the supreme audit heads as follows.

1. Countries in which their legislative bodies stipulate that the discharge of the supreme audit heads must be approved by the legislative authority or the head of the state. These countries are Jordan, Saudi Arabia, Sudan, Somalia, Kuwait, Libya, Egypt, and Yemen PDR.

Exhibit 1. Establishment of Supreme Audit Institutions

Country	*Year and title*	*Legislation creating*
Algeria	1962 No title; attached to the Ministry of Finance; neither autonomous nor independent	
Egypt	1942 Central Auditing Organization (CAO)[1]	Act No. (52)
Iraq	1927 General Accounts Auditing Department[2]	
Jordan	1931[3]	
Kuwait	1964 Audit Bureau	Act No. (30)
Lebanon	1959 Audit Bureau	Legislative Decree No. (118)
Libya	1955 Audit Bureau[4]	Act No. (31)
Morocco	Moroccan Local Committee for Auditing[5]	
Qatar	1973 Audit Bureau	Act No. (5)
Saudi Arabia	1954 General Auditing Bureau[6]	
Somalia	1960 Auditing Judge Office[7]	
Sudan	1933 Auditing Institution[8]	Auditing Act
Syria	1938[9]	Act No. (38)
Tunisia	1968 Auditing Department	Act No. (8)
Yemen Arab Republic	1974 General Auditing and Accounting Institution	Revolutionary Council Decree No. (54)
Yemen PDR	1972 General Auditing Institution	Act No. (16)

[1] Replaced in 1964 by the Central Auditing Organization (CAO) as a result of the nationalization of major private enterprises in 1961, the estabilshment of government-initiated industrial and commercial enterprises on the one hand and the adoption of comprehensive national development planning on the other hand. In 1975, a further step taken to stress the independence of the CAO was to attach it to the People's Assembly (Egyptian Parliament) as an autonomous, independent institution.
[2] Replaced in 1968 by the Supreme Audit Bureau as a result of the government's deep involvement in the economic and social activities, and the establishment of various public enterprises (industrial and commercial). The scope and nature of audits were extended to include the government administrative units as well as the newly established public enterprises and agencies.
[3] Replaced in 1952 by the Audit Bureau with expanded responsibilities in scope and nature.
[4] Revised and modified in 1966 with new responsibilities and duties, and again in 1975 as a result of its new role in controlling and auditing public enterprises and companies owned by the state.
[5] Reorganized by Royal Decree No. (1/59/279) in 1960 establishing the National Audit Committee.
[6] Was made an independent entity attached to the office of the prime minister in 1971.
[7] Established with the merger of Italian Somalia and the Colony of Somalia in 1960; after the revolution of 1972, the Audit Bureau was founded.
[8] Replaced in 1970 with the General Auditor Bureau.
[9] Replaced by the Central Auditing Organization (CAO) in 1967, with expanded responsibilities to include the control of all public enterprises, agencies, and companies, in addition to the administrative units, and the technical follow-up of the implementation of national development plans. It was attached to and supervised by the minister of finance. In 1968, another institution — the Central Auditing and Checking Organization — for financial checking, inspection, and auditing was established. It reports directly to the prime minister and is authorized to conduct all types of audits including financial, compliance, and operational auditing.

Exhibit 2. Attachment of Institutions

Country	*Legislative authority*	*Head of state*	*Prime minister or minister's cabinet*
Algeria*			
Egypt	X		
Iraq	X		
Jordan			X
Kuwait	X		
Lebanon			X
Libya	X		
Morocco		X	
Qatar		X	
Saudi Arabia		X	
Somalia	X		
Sudan	X		
Syria			X
Tunisia		X	
Yemen Arab Rep.		X	
Yemen PDR			X

* In Algeria, the responsibility of auditing is entrusted to the Budget and Control Department and Financial Checking Department. Both departments are attached to the Ministry of Finance.

2. Countries in which their legislative bodies stipulate that the discharge of the supreme audit heads must be made after a trial with special conditions: Tunisia, Syria, Iraq, Qatar, and Lebanon.
3. Countries in which their legislative bodies have no kinds of immunity rules concerning the supreme audit heads: Morocco and Yemen Arab Republic.

ORGANIZATION AND STAFFING

There is no unified organizational framework followed by the Arab Supreme Audit Institutions in the Arab states. For example, Tunisia and Lebanon follow the judiciary classification. Sudan, Somalia, Kuwait, Qatar, Libya, Yemen Arab Republic, and Yemen PDR follow administrative classifications of the government. Jordan, Saudi Arabia, Syria, Iraq, and Morocco follow functional classifications of the government. Egypt uses a combination of the administrative and functional classifications plan.

Institution's Heads

The characteristics and qualifications required for the appointment of the supreme audit heads in most of the developed countries are unique,

but with some similarities. Studies indicate that these requirements in the Arab states vary from one country to another.

Heads' functional level. The functional level required for the heads of the supreme audit institutions may be classified into three groups:

1. Level of minister or equivalent is required in Jordan, Sudan, Yemen Arab Republic, Libya, Iraq, Kuwait, Saudi Arabia, and Egypt.
2. Special level (higher than general director and lower than minister levels) is required in Tunisia, Syria, Qatar, and Lebanon. In these countries, however, the head of the supreme audit institution has the authority of a minister in conducting the institution's affairs.
3. General director level is required in Morocco, Yemen PDR, Somalia, and Algeria.

Appointment of institution's heads. The appointment of the supreme audit heads in all Arab states is made by a decree or an order by the head of state. The only exception is Algeria where the supreme audit affairs are performed by administrative units in the Ministry of Finance.

Appointment requirements for supreme audit head. These can be divided into three categories: (1) countries without specific appointment conditions: selection and appointment of the supreme audit head are the responsibility of the head of state, (2) countries which stipulate functional conditions with no specific college degree, and (3) countries which specify appointment conditions. The countries are organized according to appointment requirements in exhibit 3.

Selection and Training of Audit Staff

Most of the countries give considerable attention to the development and training of their public auditors. Staats mentioned that "the training of government auditors may be the greatest challenge that our profession faces today and will face tomorrow. International audit standards may be adopted for government use; but if no audit capability exists, standards are meaningless."[13]

Unfortunately, training in governmental auditing and program evaluation is often a neglected area of education in developing countries. For years, the accounting and auditing positions in the governments of most Arab states have been staffed primarily by high school or junior college graduates.

[13] Elmer B. Staats, "Renewed Emphasis on Audit Training and Professional Development," *International Journal of Government Auditing* (January 1979): 1.

Exhibit 3. Appointment Requirements for Supreme Audit Head

Country	*Description*
Jordan Saudi Arabia Sudan Somalia Egypt Morocco Yemen PDR	In these countries, there are no specific appointment conditions. The selection and appointment of the supreme audit head are the responsibility of the head of state.
Tunisia	The head must be one of the senior staff in the state.
Yemen Arab Rep.	The head must have the qualification required for appointment of a minister.
Lebanon	The head must be one of the state's judges, or one who served as a general director in the Ministry of Justice.
Iraq	The head must hold a university degree in law or economics (Ph.D., master's, or bachelor's degree) with a set minimum of years of experience based on the degree level.
Qatar	The head must be a specialized person in accounting (Ph.D., master's degree, or chartered accountant) in addition to having a number of years' experience in governmental accounting and auditing.
Syria	The head must hold a university degree.

Number of Staff

The size of the auditing staffs in the several Arab states varies significantly from one country to another. This variation is due to several factors including the following:

1. There is a lack of specific standards by which the size of the technical auditing staffs should be determined. These standards are related to different areas, such as amount of work; number of budgets to be audited; number of governmental units (administrative and economic) to be audited; size of inflows and outflows; kinds and types of audits to be exercised; number of vouchers, records, and financial statements; and so on.
2. There is a lack of the specialized technical staff needed to satisfy the needs of the Arab Supreme Audit Institutions.
3. There is a low salary rate in the public sector compared with that of the private sector.

Staff Qualifications

The auditor's qualifications in the Arab states vary according to the nature and speciality of audits exercised by each country. Some institutions require that the public auditor hold a high degree of education or a university degree; some countries even specify the kind of degree which is needed. In general, there are various qualifications available in such areas as law, economics, accounting, business administration, public administration, sociology, and other fields. In Egypt, a university degree in accounting, economics, business administration, or public administration is required. In addition, its supreme audit institution requires that other specialities in engineering, medicine, and agriculture may also be needed for the purpose of performance evaluation in such areas.

Auditor's Immunity

The degree of immunity given to the public auditors in the Arab states can be classified into three categories:

1. Countries which grant the public auditors the same level of immunity given to the head of the supreme audit institution: Tunisia, Syria, Qatar, Lebanon, and Egypt (but only for senior auditors).
2. Countries which grant their top-level auditors a type of immunity concerning terms of their trial (other auditors do not have such immunity) : Iraq and Libya.
3. Countries which do not grant any kind of immunity to their auditing staff: Jordan, Saudi Arabia, Sudan, Somalia, Morocco, Yemen PDR, and Yemen Arab Republic.

Laws of supreme audit institutions, in such countries as Saudi Arabia and Iraq, grant the public auditors financial incentives and rewards.

Staff Training

The training of auditing staffs in the Arab states may be divided into the following.

1. Countries in which the supreme audit institutions provide their own needed training programs. In addition, auditors benefit from special training programs and workshops which are given by other training institutions: Tunisia, Iraq, Egypt, Yemen Arab Republic, and Yemen PDR.
2. Countries in which the training of the supreme audit staff is conducted through specialized training institutions: Jordan, Saudi Arabia, Sudan, Syria, Somalia, Kuwait, Lebanon, and Libya.

3. Countries which do not provide or offer any kind of training, either on their own or through other institutions: Qatar and Morocco.

FUNCTIONS AND RESPONSIBILITIES

Generally speaking, the functions and responsibilities of the supreme audit institutions in most countries cover the audits of the financial statements of all units which are financed through the general budget or through government subsidies. In the Arab states, the supreme audit institutions are required to audit all units which receive or spend public funds, specifically governmental administrative units (ministries, agencies, and so on), financial statements of the government general budget, financial statements of amended budgets, and financial statements of public enterprises. In addition to these responsibilities, some supreme audit institutions extend their audits to include the financial accounts of the following:

1. Financial statements of special budgets: Libya, Kuwait, Jordan, Iraq, and Yemen Arab Republic.
2. Public corporations, agencies, organizations, and their subsidiaries: Egypt, Syria, Iraq, and Libya.
3. All institutions subsidized by the state or for which the state guarantees minimum profits: Libya, Jordan, Morocco, Sudan, Lebanon, Saudi Arabia, and Syria.

SCOPE AND EXTENT OF AUDITING PUBLIC FUNDS

The scope and the extent of audits conducted by Arab Supreme Audit Institutions cover the following:

1. Governmental administrative units include all central government administrative units, decentral units in local governments and regions, governmental companies and organizations, public enterprises with which their budgets are affiliated in respect to the general budget, and independent public companies and enterprises which have separate budgets (not included in the general budget).
2. Public and mixed companies (those which have their capital completely or partially financed by the government). Public companies fully financed by the government are audited by the supreme audit institutions in all Arab states. Most of the Arab states give the authority to their institutions to audit mixed companies.
3. Private companies which receive governmental grants or are guaranteed minimum profits usually are subject to audit by the supreme

audit institution in Sudan, Syria, Lebanon, Libya, Morocco, Yemen Arab Republic, and Yemen PDR.

4. Professional societies, unions, and organizations of general benefits are subject to the supreme audits in Sudan, Syria, Yemen Arab Republic, and Yemen PDR.

5. Expenditures of special nature include military expenditures which are subject to audit by the supreme audit institutions only in Lebanon, Libya, and Syria. In Syria, however, arms purchase contracts are not subject to audit except after the expenditures are made. Secret expenditures are subject to audit in Syria (in total amounts only), Somalia, Kuwait, Iraq, Lebanon, Libya, and Morocco.

DISCIPLINARY MEASURES FOR FINANCIAL VIOLATIONS

Legislation in the Arab states give the authority to their supreme audit institutions to investigate all financial violations discovered. This insures that appropriate disciplinary measures are taken against the individuals responsible for such violations. The role of the audit institutions in this matter varies from one country to another as indicated in exhibit 4.

Exhibit 4. Disciplinary Measures for Financial Violations

Country	*Case 1*	*Case 2*	*Case 3*	*Case 4*
Algeria				
Egypt				
Iraq	X	X	X	X
Jordan		X	X	
Kuwait				
Lebanon	X		X	X
Libya				X
Morocco	X			X
Qatar	X			X
Saudi Arabia			X	
Somalia			X	
Sudan	X	X	X	X
Syria	X	X	X	
Tunisia	X		X	X
Yemen Arab Republic				
Yemen PDR				

Case 1: The institution has the authority to investigate financial violations.
Case 2: The institution takes its required protective procedures against employees responsible for financial violations.
Case 3: The institution transfers guilty employees to court.
Case 4: The institution determines the appropriate fines on the public employees.

TYPES OF AUDITING AND SAMPLING

Supreme audit institutions in the Arab states, in general, perform post-audit and pre-audit procedures.

Kinds of Audits

1. Countries applying post-audit only. This type of audit is made after the fact. Its purpose is to ensure compliance and to discover errors, inaccurate calculations, and so on. Countries exercising this type of auditing are Jordan, Tunisia, Saudi Arabia, Syria, Lebanon, Egypt, Morocco, Yemen Arab Republic, and Yemen PDR.
2. Countries applying post-audit as a base and pre-audit in particular situations. In these countries, supreme audit institutions exercise a pre-audit, usually in cases of tender terms, governmental contracts, obligations exceeding specific amounts of money (which differ from country to country). This is in addition to a post-audit. The countries involved are Kuwait, Libya, Qatar, Somalia, Sudan, and Iraq where the supreme audit institutions have the right to exercise detailed pre-audits related to expenditures if they contribute to the public benefits.

Nature and Purpose of Audits

The kinds of audits exercised by the supreme audit institutions in the Arab states are characterized as financial, compliance, and operational (performance) auditing. Operational auditing is exercised to evaluate performance, effectiveness, and efficiency in Egypt, Tunisia, Iraq, and Yemen Arab Republic. This kind of audit needs more technical attention to be more useful and to achieve its objectives.

Types and Scope of Audits

Arab Supreme Audit Institutions exercise different types of audits depending upon the availability and capability of their staff.

1. Audit format (total or detailed audits) — a detailed audit is exercised in all of the Arab states, except in Iraq where the basic rule is to exercise total auditing and to use detailed audit according to circumstances. Jordan, Kuwait, and Lebanon apply both total and detailed auditing. Total auditing means to audit total figures without any details, while detailed auditing means to audit every figure or process or transaction in a detailed manner.
2. Comprehensive audit and sampling procedures — Jordan, Syria, Libya, Egypt, Qatar, Kuwait, Yemen Arab Republic, and Yemen PDR conduct both sampling and comprehensive auditing. Sudan uses sampling procedures in relation to expenditures, and comprehensive audit-

ing in relation to revenues. Saudi Arabia and Iraq are the only Arab countries which utilize sampling auditing in their public audits. Tunisia and Morocco apply comprehensive auditing.

ROLE OF SUPREME AUDIT INSTITUTION AS CONSULTATIVE BODY

Most economically developed countries give their supreme audit institutions some rights to exercise a consultative role in providing both legislative and executive bodies with opinions and advice concerning the findings they audit. They are allowed to submit comments and suggestions concerning proposed financial laws and regulations for modification purposes.

Arab Supreme Audit Institutions play different roles as consultative bodies from the point of specialization and application. Exhibit 5 indicates the role exercised by the audit institution in the various countries studied.

IMPLEMENTING AUDITING RECOMMENDATIONS

In most countries, recommendations of the supreme audit institution are considered unauthoritative. In some countries, however, especially in the case of intended fraud or bribery or violation of the basic laws,

Exhibit 5. The Role of the Supreme Audit Institution as a Consultative Body

Country	*Case 1*	*Case 2*	*Case 3*	*Case 4*
Algeria	X	X		
Egypt	X	X		
Iraq	X	X		
Jordan	X	X	X	
Kuwait	X	X		
Lebanon	X	X	X	
Libya	X	X		
Morocco	X	X		
Qatar	X	X	X	
Saudi Arabia	X	X	X	
Somalia	X	X		
Sudan	X	X	X	X
Syria	X	X		X
Tunisia	X	X		
Yemen Arab Rep.	X	X	X	
Yemen PDR	X	X		

Case 1: Showing opinions concerning financial and accounting legislation.
Case 2: Expressing opinions concerning issues submitted by the executive bodies for this purpose.
Case 3: Reviewing various financial cases.
Case 4: Reviewing financial claims submitted by public employees against their superiors.

they are authoritative. In the Arab states, recommendations of the supreme audit institutions are considered unauthoritative in Jordan, Somalia, and Egypt. In the other countries, they are considered authoritative, although they are subject to discard through the prime minister in Syria and Saudi Arabia, through the legislative authority in Iraq and Lebanon, and through the Supreme Court in Libya.

REPORTING

Annual reports represent a general evaluation of the government accounts audited for the preceding fiscal year. Usually, these reports contain remarks and comments which the institution considers important.

Generally speaking, then, the most substantial reporting assignment is the annual report which must be prepared by the Arab Supreme Audit Institutions after the close of the national accounts of each fiscal year. While these reports are usually submitted to the legislative authorities or to the head of the state, according to each country's legislation, some institutions submit copies to their executive bodies.

Annual reports, however, are not the only reporting device available to the Arab Supreme Audit Institutions. Other special reports may be submitted throughout the year (general and special) at any time on any subject (financial or accounting) on the institute's own initiative or at the request of the legislative or executive authorities. These reports sometimes express an urgent need for remedial action, or bring to the attention of the concerned bodies the audit findings and remarks related to specific matters.

Kinds of Reports

Public auditing reports in the Arab states can be classified as follows:

1. All Arab Supreme Audit Institutions are required to prepare and submit annual reports containing the results and findings of their audits, along with comments and suggestions.
2. Arab institutions are required to submit term reports at systematic intervals for follow-up purposes in Kuwait, Yemen Arab Republic, Yemen PDR, Syria, and the Sudan. These reports are in addition to the annual reports.
3. All Arab Supreme Audit Institutions, except for the Yemen Arab Republic, prepare special reports at any time to call attention to specific matters or issues needing urgent action. Such reports can be submitted on the institution's own initiative or at the request of top authorities in Iraq, Libya, Egypt, and Morocco.

Where Are Reports to Be Submitted?

As a basic rule, supreme audit institutions submit their annual reports to the parties to whom they are officially attached. The variations among the Arab states can be noted in exhibit 6.[14]

Publication of Reports

The publication of annual reports depends upon the institution act in each country as follows:

1. In Saudi Arabia, Qatar, and Yemen Arab Republic, the supreme audit institution annual report is considered a secret report and is not published.
2. In Tunisia, the president must permit the publication of the general annual report.
3. In Iraq, the supreme audit institution officially publishes what it

Exhibit 6. Reporting

Country	*Reports submitted to*	*Annual reports*	*Term reports*	*Special reports*
Algeria		X		
Egypt	(2)	X		X
Iraq	(4)	X		X
Jordan	(1)	X		
Kuwait	(1)	X	X	
Lebanon	(1)	X		
Libya	(3)	X		X
Morocco	(4)	X		X
Qatar	(3)	X		
Saudi Arabia	(3)	X		
Somalia	(3)	X		
Sudan	(1)	X	X	
Syria	(5)	X	X	
Tunisia	(2)	X		
Yemen Arab Rep.	(1)	X	X	
Yemen PDR	(2)	X	X	

(1) Reports are submitted to each of the legislative authorities, to the head of the state, and minister of finance.
(2) Reports are submitted to the head of the state and to the legislative bodies.
(3) Reports are submitted to the head of the state and the Council of Ministers and the minister of finance.
(4) Reports are submitted only to the head of the state.
(5) Reports are submitted to the Council of Ministers, and to the minister of finance and other concerned ministers.

[14] In Iraq, the supreme audit institution has the right to submit its reports concerning important matters to the executive authorities.

considers appropriate for publication after obtaining the approval of the president of the legislative authority.

4. In Sudan, the approval of the legislative authority is required in order to publish the annual report.

5. In Morocco, the final financial accounts of the government are the only material which can be officially published in the *Official Journal*. Also, in Lebanon the final accounts of the government with the official replies are published in the *Official Journal*. Lebanon also writes up its annual report in a special publication.

6. In Saudi Arabia, Jordan, Sudan, Iraq, Kuwait, Syria, Lebanon, Egypt, and the Yemen Arab Republic, all of the supreme audit institution comments and remarks are sent periodically to the concerned bodies who are asked to provide the institution with their replies within two months.

RELATIONSHIP WITH OTHER FINANCIAL CONTROL BODIES

The relationship between the supreme audit institution and other financial units must be based upon the coordination and integration of the financial control process. It is the supreme audit institution's responsibility to direct and organize the control process in order to achieve its auditing objectives in a systematic manner, and to avoid duplication of control work. This can be done through time audit planning and by guiding internal control units so that their work may follow unified and well-organized techniques and procedures of auditing in the evaluation of how well government programs attained their proposed goals.

The studies made of Arab Supreme Audit Institutions showed that the relationship between these institutions and other internal control units is not clear. In some countries, this relationship is represented by the participation of the institution in some control committees, by having representatives in the government accounts departments, or by exchanging reports and opinions concerning financial control matters.

The following summary shows the type and nature of relationship between the Arab Supreme Audit Institutions and the various internal control units.

The Budget Department

Most Arab states have a limited relationship between their institutions and their Budget Department. It is expressed by exchanging opinions concerning the control process over budget execution or participation

in some control committees. The states of this type are Jordan, Tunisia, Saudi Arabia, Syria, Somalia, Libya, Lebanon, Kuwait, and Yemen PDR.

Central Department of Government Accounts

The relationship in this area is limited to having representatives from the institution in the department of government accounts, or having control of committee participation. Sometimes the relationship can be found in the presentation of the accounting reports to the supreme audit institution, as well as in the exchange of opinions and reports. States of this type include Jordan, Saudi Arabia, Sudan, Iraq, and Yemen PDR.

Financial Checking Organizations

The relationship between the institution and the financial checking organization is weak in most of the Arab states. In Tunisia, Saudi Arabia, Lebanon, and Yemen PDR where such organizations exist, the relationship is represented by having institution representatives in these organizations or by having the institution participate in the control or by having other committees available to assist in the checking. In some countries, the relationship is limited to submitting the organization's reports containing its control findings to the supreme audit institution. In Syria, where there is a well-integrated control system between the two bodies, the case is different. There is a full coordination between the supreme audit institution and the financial checking organization in Syria.

Other Financial Control Units

The relationship between the Arab Supreme Audit Institution and other financial control units, such as those in charge of controlling the execution of development plans and programs in the local governments or state's districts, is characterized as a cooperative function where these units submit their reports to the institution and exchange financial opinions. This kind of relationship is found in Iraq, Lebanon, Libya, Egypt, and Yemen PDR.

Private Auditing Offices

The relationship between the supreme audit institution and private auditing offices differs from one country to another. In Sudan, Qatar, and Yemen PDR, the institution is asked to give its opinion concerning any audit assignment of government unit's accounts given to a private auditing office. In Egypt and Libya, moreover, the supreme audit in-

stitution has the right to supervise the audit work of these offices, and to determine their fees.

The Relationship between the Institution and the Civil Service Bureau

In most Arab states, administrative decisions concerning employees' appointment or promotion must be controlled by the supreme audit institution where copies of these decisions are sent to the institution. If there is any violation of existing laws and regulations, the institution has the right to object on the basis of their legality.

OPERATIONAL AUDITING AND AUDITING STANDARDS

Operational auditing is needed both in developed and developing countries. Operational or management or performance auditing means extending the audit scope and nature one step beyond the traditional criterion of government auditing which is based upon concepts of legality and compliance with existing regulations toward other, broader criteria involving productivity of operations where auditors' examination and verification of government transactions are expressed in terms of economy, efficiency, and effectiveness. This kind of auditing is needed in order to promote, as well as protect, governmental services by maximizing the effective, economic, and efficient use of scarce resources.

Operational auditing in the Arab states is exercised on a limited scope in Egypt, Iraq, Syria, and Yemen PDR. In Egypt, this task is conducted through one central department which covers the following aspects:

1. Program auditing, which measures the degree of achievement of annual operating targets set for the various units subject to CAO control. In the case of public enterprises, it covers production and sales targets, and export objectives, among other details.
2. Efficiency auditing, which measures the degree of efficiency of each unit in utilizing its available resources (inputs), includes time comparisons of production costs, labor productivity, and rate of return on investment, among other matters.
3. Effectiveness auditing is designed to evaluate whether government programs had achieved their expected objectives.
4. Follow-up of implementation of investment projects included in the national development plan is used to determine actual costs and to compare those costs with planned costs.[15]

[15] "Audit Profile: Central Auditing Organization of Egypt," *International Journal of Government Auditing* (January 1981):17.

SUMMARY AND RECOMMENDATIONS

In recent years, the Arab states have placed more emphasis on implementing comprehensive national development plans. The achievement of the goals and objectives of these plans, in addition to the maximization of the quality of various governmental services, has challenged the various national supreme audit institutions to play a more effective role in exercising their audits. This condition necessitated the adoption of modern auditing techniques and procedures.

Studies of sixteen Arab Supreme Audit Institutions indicate that these institutions are performing mainly financial and compliance auditing, with less attention to operational auditing. It is clear that supreme audit institutions suffer from various problems, both internal and external. Internal problems include organizational structure, lack of full independence, lack of qualified staff, losses of qualified staff, lack of adequate training programs, and institution budget constraints. External problems result from rapidly changing economic, social, and political pressures, bureaucratic traditions and routines, inadequate reporting, weak control, and insufficient information in audited units; however, there is also a lack of adequate coordination and integration of control systems with other financial control bodies.

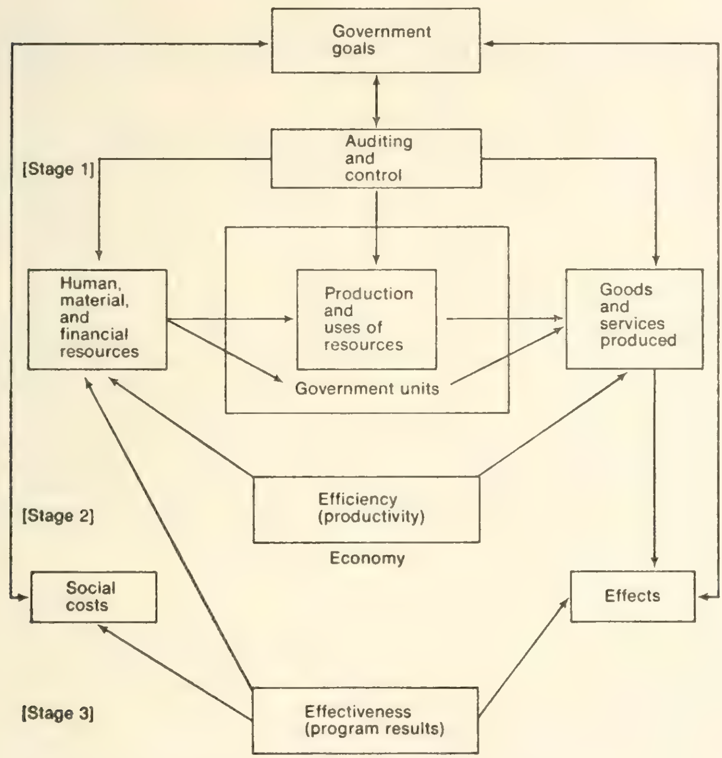
To achieve the objectives of effective auditing in the Arab states, this author suggests the following:

1. Sufficient authority, independence, and autonomy are needed for supreme audit institutions so that they may perform their audit function properly and fully.
2. Well-qualified persons must be appointed heads of the supreme audit institutions and should be appointed by the head of the state with approval of the legislative authority. In addition, immunity must be given to the institution head and his deputy or deputies.
3. The institution must appropriately advise and direct various public employees in the exercise of their duties. The studies indicate that the main objective of the auditors is to discover errors or financial violations (negative behavior).
4. The supreme audit institutions must have the authority to discharge their responsibilities of investigating financial violations and taking the appropriate protective measures.
5. The institutions must be more responsible in planning and organizing the work of internal control units to achieve more integration and to avoid duplication of work. This can be done by examining the internal control systems, techniques, and procedures. They should also suggest appropriate, effective methods for applying internal control.

6. Well-planned training programs for the auditing staff are needed. Such programs should be performed through the institution itself, or through regional and national institutions. This type of training will give more attention to both the specific needs and the auditing problems of each country. The Arab Organization of Administrative Sciences is a good place for such training. In addition, Arab business schools and colleges must give more attention to government accounting and public auditing in their education programs. Speakers from developed countries, who have experience in audit techniques, procedures, and standards, will be very helpful as academicians and practitioners.
7. Special incentives and salary rates must be attractive enough to interest college graduates with a degree in accounting to join the supreme audit institutions.
8. The use of electronic data processing is important since government transactions are growing in size and nature daily. This will be helpful in handling taxes, driver-license accounting, pension accounting, education, statistics, and other matters.
9. The supreme audit institution should evaluate the performance of the state enterprises in relation to the social, economic, and commercial objectives established for those enterprises. This will concern government policies, the current situation, and other specific circumstances of the socioeconomic environment in each state.
10. An integrated auditing system should include not only financial and compliance auditing but also operational (performance) audit for determining the degree to which the goals and programmed objectives have been accomplished. It will also determine the levels of economy, effectiveness, and efficiency developed in the activities and the management of the available resources (human, material, and financial).
11. Exhibit 7 is suggested as a comprehensive framework of auditing and accountability which might be useful for achieving the objectives of public auditing, for providing useful information for decision making, and for making satisfactory corrective measures. This model includes three auditing elements which must function according to the standards illustrated in exhibit 7.

Stage 1 — Financial and compliance: To determine (1) the verification of government transactions, records, registers, reports, and financial statements corresponding to the period being examined, (2) the degree that financial reports of an audit entity are presented fairly, (3) the evaluation of compliance with or fulfillment of the legal and internal requirements in force, and (4) the extent of review and evaluation of the internal financial control systems.

Exhibit 7. Elements of Governmental Auditing



Stage 2 — Efficiency or productivity: This may be defined in terms of ratios of some physical measure of output from the activity or program to the costs of that activity or program.[16] In other words, it relates to the way in which materials and resources are transformed into goods and services. Economy and efficiency determine whether the entity is managing or utilizing its available resources in an economic and efficient manner, and it identifies the causes of any inadequacies in management information system.[17] The auditing function will include (1) reviewing and evaluating the efficiency and economy with which the human, material, and financial resources have been employed, and

[16] General Accounting Office, *Standards for Audit of Governmental Organizations, Programs, Activities and Functions.*
[17] Ibid.

(2) reviewing and evaluating the planning, organization, and internal administrative control.

Stage 3 — Effectiveness and program results: The GAO defined effectiveness accountability as the degree of success in the achievement of the organization's objectives.[18] In other words, effectiveness relates to the extent to which intended effects are achieved with optimum benefits from resources. The auditing process in this stage must concentrate on reviewing and evaluating the results of the programmed operations to determine whether they have achieved the proposed goals and objectives, and whether the government unit has considered alternatives which might yield desired results at a lower cost.[19]

Arab states must place more emphasis on operational or performance auditing to ensure the fulfillment of the proposed goals and objectives, measuring the physical execution of development plans and programs according to their estimated budgets and time schedules, identifying deviations which have occurred, and providing useful information concerning the levels of economy, efficiency, and effectiveness of the government's various activities. Such information will then be very useful for decision making and financial policy formulation.

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[18] Ibid.

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"Bottom Line Compliance" with the IASC: A Comparative Analysis

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BACKGROUND

Introduction

The problem of diversity in national accounting principles has a long history. When nations emerged as distinct political units because of divergent environmental factors such as culture, language, and political and economic systems, the conditions encouraged each nation to establish accounting standards which tended to mirror the nation's diverse factors.[1] This is not surprising, since nations also prefer their own currency, customs, and laws. A comparison of the accounting standards in the major nations today reveals that differences continue to exist.

Although understandable, this current situation of national diversity in accounting principles is not necessarily optimal for the worldwide allocation of economic resources. Distinct national economies do exist, but now there is also a world economy in which trade, investment, and capital flow freely from country to country. National differences in accounting principles, however, impede this flow since resource allocation decisions are thought to be based on accounting information that is heterogeneous in nature.

A recent study by Scott found that one of the most important categories of accounting problems was that of international accounting

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[1] Financial Accounting Standards Board, "Objectives of Financial Reporting by Business Enterprises," *Statement of Financial Accounting Concepts No. 1* (Stamford, Conn.: FASB, 1978).

standards.[2] Within this category, the most important perceived problem was that the lack of international accounting standards greatly diminished the usefulness of financial statements to users in countries other than that on whose accounting standards the statements are based.

This problem was recognized as early as the late 1950s by Kraayenhof who made a personal plea for an effort to reduce the diversity.[3] As it became increasingly apparent that national diversity existed and was not economically desirable, attention was focused on ways to remedy this situation. Two general views emerged.

One school of thought emphasized the justification for such differences.[4] An extension of this view held that the natural evolution of accounting principles within each nation would narrow alternatives and this would, internationally, also reduce the degree of diversity found from country to country. Other natural forces, such as the international competition for capital, would also work to reduce diversity. Evidence of this latter phenomena was found.[5] Today, as illustrated by the consultation of the Financial Accounting Standards Board (FASB) with other countries while considering changes in Statement of Financial Accounting Standard (SFAS) No. 8, informal efforts are still being made to reduce diversity.

The other (more dominant) view posits that formal action should be taken to reduce the diversity. Consistent with this view, a number (approximately ten) of accounting standard-setting bodies which claim internationl jurisdiction for their pronouncements have emerged in the last decade. The four main organizations are the International Accounting Standards Committee (IASC), the European Economic Community, the United Nations, and the International Federation of Accountants. Each has been active in issuing accounting and financial reporting rules which, if followed, would reduce the diversity and result in greater harmony in accounting principles from country to country. These current attempts at international harmonization, however, have created a number of related problems, especially with regard to the composition and authority of these standard-setting bodies.

[2] G. Scott and P. Troberg, *Eighty-eight International Accounting Problems in Rank Order of Importance — A DELPHI Evaluation* (Sarasota, Fla.: American Accounting Association, 1980).

[3] Jacob Kraayenhof, "International Challenges for Accounting," *Journal of Accountancy* (January 1960).

[4] Irving L. Fantl, "Case against International Uniformity," *Management Accounting* (May 1971).

[5] Frederick Choi, "Multinational Financing and Accounting Harmony," *Management Accounting* (March 1974).

The failure of these agencies to coordinate their efforts has created problems of overlapping jurisdictions. Their productivity has created a bewildering array of new international accounting rules. For example, at last count, IASC has issued sixteen standards, has seven exposure drafts outstanding, and has authorized seven research projects. The question of the authority of these agencies is paramount, since almost all nations have retained their sovereignty to issue accounting standards.

THE IASC

Given these developments, it is now appropriate to evaluate this approach to achieving greater harmonization of international financial accounting standards by standard-setting bodies. The evaluation should focus on the IASC, the premier international body and the most productive issuer of international accounting standards. It is also the only body issuing statements with a global rather than a regional orientation. So far, it has raised most of the important questions regarding international accounting standards.[6]

The IASC was formed in 1973 by leading accounting professional bodies in nine nations: Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom and Ireland, and the United States. It is important to note that nations are not members of the IASC; instead, professional accounting bodies within nations are members (for example, the American Institute of Certified Public Accountants, not the FASB, is the representative of the United States). The objective of the IASC is simply to issue international accounting standards to be followed in the presentation of audited financial statements. Currently, sixty-one national accounting bodies are members of the IASC. Each member is pledged to use its "best endeavors" to ensure that (1) accounting standards in its respective country conform to those of the IASC, (2) the independent auditors satisfy themselves that the financial statements comply with these standards or that the fact of noncompliance is disclosed in the financial statements, and (3) in the event of nondisclosure, reference to noncompliance is made in the audit report.[7]

The IASC follows a due process procedure similar to that of the FASB. Such procedures followed in developing international accounting standards are these:

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[6] Thomas G. Evans, "Can American Accountants Serve Two Masters: FASB and IASC?" *CPA Journal* (January 1976).

[7] International Accounting Standards Committee, *Preface to the Statements of International Accounting Standards* (London: IASC, 1974).

- The Board selects an *agenda* of subjects to be studied.
- A Steering Committee, comprised of three members drawn from different countries, is appointed to develop an exposure draft on each subject.
- The exposure draft is submitted to the Board for approval.
- When approved by a *two-thirds vote of the Board,* the exposure draft is sent to professional accounting bodies and others for *comment.* The comment period, generally, is a minimum of four months.
- The Steering Committee reviews the comments and *drafts a final Standard.*
- A final Standard, when approved by at least three-quarters of the Board, is issued.[8]

In addition, the IASC should be the focus of any evaluation of the impact of international harmonization of financial accounting standards because it has the longest history of any other organization and because it is widely recognized as the main body for achieving success in international harmonization: "The work of the IASC is without doubt the most promising development so far [in international harmonization]. . . ."[9] ". . . the IASC has been the most successful of any of the *large-scale* international efforts toward harmonizing accounting standards."[10] Concerning the IASC, it is particularly interesting that at least nine nations (Bahamas, Fiji, France, Malaysia, Nigeria, Pakistan, Singapore, Trinidad, and Zimbabwe Rhodesia) are reported to have accorded IASC standards the same status as domestic accounting standards.[11]

Research Issues

The preceding events raise the following questions concerning the ISAC's performance to date:

1. Have IASC standards been accepted and followed by firms in member nations? This question of acceptance is critical to the whole issue of international harmonization by direct action through a formal agency, such as the IASC. The IASC has attempted to bridge this gap through its pledge of "best endeavors" by members. Has this approach worked? Are IASC standards really being followed in those countries? If not, then IASC standards will not achieve international harmonization.

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[8] Deloitte, Haskins & Sells, *International Accounting Standards Committee* (D, H & S, 1981).

[9] Frederick Choi and Gerhard Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978).

[10] J. Arpan and Lee Radebaugh, *International Accounting and Multinational Enterprises* (Boston: Warren, Gorham, and Lamont, 1981).

[11] R. Fitzgerald, A. Stickler, and T. Watts, eds., *International Survey of Accounting Principles and Reporting Practices* (Scarborough, Ontario, Canada: Price Waterhouse International, 1979).

2. What impact has the IASC had on the generally accepted accounting principles (GAAP) of developing countries? A special case for increased international harmonization can be made by asserting that the IASC directly benefits developing nations who lack a strong accounting profession and accounting infrastructure. If these nations can simply adopt IASC standards as their own GAAP, they will save themselves the effort and will also result in greater harmonization. The question then becomes whether the IASC has become the standard setter for those nations and how is it perceived in those nations. If the IASC is of benefit to those nations, how has this contributed to international harmonization?

3. How does the accounting profession (public accounting and industry) in developed nations, such as the United States, view the IASC and its standards? What are the perceptions of multinational firms which should be in compliance with IASC standards? This is a critical factor in the question of international harmonization and the IASC: lacking the formal authority to set accounting standards in member nations, has it been accorded the status it needs to obtain acceptance for its pronouncements?

RESEARCH METHODOLOGY

This paper reports on the first phase of an investigation into these problems. To determine the impact of IASC standards on the financial reporting in member nations, financial reports were analyzed. The IASC has issued sixteen standards to date; five of the earlier ones were selected and used to check compliance in a sample of five IASC member nations. The standards and their effective dates are as follows:

IASC standard		*Effective date*
No. 2	"Valuation and Presentation of Inventories"	12/31/76
No. 3	"Consolidated Financial Statements"	12/31/77
No. 4	"Depreciation Accounting"	12/31/77
No. 6	"Accounting Responses to Changing Prices"	12/31/78
No. 7	"Statement of Changes in Financial Position"	12/31/79

Major Provisions of IASC Standards

The major provisions for each of the five standards selected are presented here.

IAS No. 2 — "Valuation and Presentation of Inventories." In the context of the historical cost system, (1) inventories should be valued at the lower of historical cost and net realizable value; (2) inventories

should be segregated in balance sheets or in notes to the financial statements to show the amounts held in different categories (such as materials, work-in-process, and finished goods), and the accounting policies adopted for valuation, including the cost method used, should be disclosed.

IAS No. 3 — "Consolidated Financial Statements." Minority interest in the equity of consolidated companies, and in the profits and losses of such companies, should be shown separately in the consolidated statements and should not be included in the shareholders' equity or consolidated net income. IAS No. 3 prescribes the equity method of accounting for investments included in consolidated statements when the investor may exercise significant influence over the investee (that is, holds 20 percent or more of the voting stock), or the investee is a subsidiary not consolidated because its activities are so dissimilar from those of the parent as to make consolidated statements meaningless.

IAS No. 4 — "Depreciation Accounting." A depreciable asset should be depreciated on a systematic basis, and its cost should be allocated to each accounting period during its useful life. Disclosures for each major class of depreciable assets should include the following: the depreciation method, useful lives or depreciation rates, depreciation expense for the period, and gross depreciable assets and accumulated depreciation.

IAS No. 6 — "Accounting Responses to Changing Prices." Information that describes the procedures adopted to reflect the impact on the financial statements of specific price changes or changes in the general level of prices, or both, should be disclosed in the financial statements. If no procedures have been adopted, that fact should be disclosed.

IAS No. 7 — "Statement of Changes in Financial Position." This requires that a statement of changes in financial position be presented as a basic financial statement.

These earlier standards were selected since countries should have had ample time to adopt them. The countries selected to determine whether they are implementing IASC standards are France, Japan, the United Kingdom, the United States, and West Germany. All of these nations are founding members of the IASC. In addition, France is the only developed country that has reportedly accorded IASC standards the same status as domestic standards.

Methodology

To determine the impact of IASC standards on financial reporting in these nations, the published financial statements of a sample of large

corporations in each country were examined to determine whether the major provisions of the five IASC pronouncements just listed are being followed. (See Appendix for a list of the firms included in the analysis.) The analysis concentrated on the consolidated financial statements. All of the Japanese and part of the French and West German statements were English-language versions.

In general, nine or ten financial statements were examined for each country and each IASC standard with a few minor exceptions. The only major exception was the case for Japan for 1975 when only four financial statements were available. For this reason, the case for Japan for 1975 was not considered in the analysis. Published financial statements were examined for each firm for the period 1975-1980. Since the earliest IASC standard was effective 31 December 1976, the current authors were able to discern whether a firm was following a certain financial accounting principle before its adoption by the IASC in a standard. The examination of the published financial statements for these nations in regard to the five IASC standards provided insight into whether these standards have had an impact on financial reporting in those nations and especially when that impact took place. In some cases, for example in the United Kingdom and the United States, it was expected that firms had followed certain reporting principles before their adoption by the IASC, and so the IASC has had no impact. However, in other nations, it was expected that the IASC has had an impact on financial reporting.

ANALYSIS OF FINDINGS

IASC No. 2, "Valuation and Presentation of Inventories"

The results of the analysis of compliance with IASC No. 2 is presented in exhibit 1. Part A concentrates on the valuation of inventories, indicating that prior to the issuance of IASC No. 2, the largest percentage of the U.K. firms in the sample were in compliance with this standard, and that the degree of compliance in the U.K. firms rose after the effective year (1976) to 100 percent and then stabilized. This can be explained by the fact that during this period, U.K. accounting standards were changed to conform to IASC No. 2. In each of the other cases, except for West Germany, the results were disappointing in that none followed the U.K. experience. Surprisingly, the case for the United States is "spotty," mainly due to the unacceptability of LIFO inventory valuation which is very popular in the United States. By the end of the period covered by the analysis, a majority of firms in the sample

Exhibit 1. Compliance with International Accounting Standard No. 2, "Valuation and Presentation of Inventories" (effective for fiscal year ending 12/31/1976)

Part A: Inventories should be valued at the lower of historical cost and net realizable value

Year	*% compliance by country*				
	France	Japan	U.K.	U.S.	W. Germany
1975	50	NA	78	44	38
1976*	22	33	80	50	67
1977	30	33	100	56	60
1978	40	33	100	50	60
1979	40	33	100	50	60
1980	30	33	100	40	60

Part B: Segregation of inventories by major categories

Year	*% compliance by country*				
	France	Japan	U.K.	U.S.	W. Germany
1975	50	NA	33	56	25
1976*	56	100	60	60	22
1977	50	100	100	56	20
1978	50	100	100	50	20
1979	50	100	100	60	20
1980	50	100	100	70	20

* Year of effect.

from West Germany and the United Kingdom were in compliance with IASC No. 2's inventory valuation procedure.

Part B concentrated on the presentation of details concerning inventory on the balance sheet. It is clear that the IASC standard had an impact in the United Kingdom, based on the sample of firms. Only in the United Kingdom is the compliance pattern demonstrated clearly, with a one-year lag period. An increase in the percentage of firms in compliance with this aspect of IASC No. 2 is evident in the United States, but otherwise the results are disappointing from a compliance viewpoint. It should be noted here that when the financial statements examined referred to national legal requirements in regard to accounting methods, where the statements themselves did not give a clear evidence of compliance with the IASC standard, none was assumed.

IASC No. 3, "Consolidated Financial Statements"

The first part of exhibit 2 focuses on the disclosure of the minority interest in the sample firms. As the analysis shows, the IASC standard

had no impact on U.K. firms in the sample, since they were fully in compliance before and after the effective date. Little impact was evident for Japan, West Germany, or France, and the record for the American firms is spotty. The wide difference in the degree of compliance with this IASC standard in 1976 regarding the disclosure of minority interest is interesting.

The use of the equity method of accounting for subsidiaries is presented in Part B of exhibit 2. As is obvious from the table based on the sample firms, the IASC standard has had no impact on the French, Japanese, and American statements. Only in the cases of the U.K. and West German firms was marginal impact noted. In West Germany, the prevalent practice is the cost method.

IASC No. 4, "Depreciation Accounting"

Two aspects of depreciation accounting are shown in exhibit 3. The first concentrates on the use of a systematic depreciation method. The

Exhibit 2. Compliance with International Accounting Standard No. 3, "Consolidated Financial Statements" (effective for fiscal year ending 12/31/1977)

Part A: Disclosure of minority interest

Year	*% compliance by country*				
	France	Japan	U.K.	U.S.	W. Germany
1975	80	NA	100	44	75
1976	78	22	100	50	78
1977*	80	22	100	56	80
1978	80	22	100	38	80
1979	80	22	100	50	80
1980	80	33	100	50	80

Part B: Use of equity method for firms in which between 20 percent and 50 percent of stock is owned

Year	*% compliance by country*				
	France	Japan	U.K.	U.S.	W. Germany
1975	90	NA	44	67	0
1976	89	33	50	70	0
1977*	90	33	50	89	10
1978	90	33	56	75	10
1979	90	33	60	80	10
1980	90	33	60	80	10

* Year of effect.

Exhibit 3. Compliance with International Accounting Standard No. 4, "Depreciation Accounting" (effective for fiscal year ending 12/31/1977)

Part A: Depreciable assets are depreciated using a systematic method

Year	*% compliance by country*				
	France	Japan	U.K.	U.S.	W. Germany
1975	70	NA	100	100	62
1976	67	67	100	100	67
1977*	70	67	100	100	70
1978	70	56	100	100	70
1979	60	56	100	100	70
1980	60	67	100	100	70

Part B: Disclosure of depreciation details

Year	*% compliance by country*				
	France	Japan	U.K.	U.S.	W. Germany
1975	10	NA	67	0	0
1976	0	11	60	10	11
1977*	10	11	50	11	0
1978	10	11	89	12	0
1979	10	11	100	30	0
1980	10	11	100	30	0

* Year of effect.

IASC standard has had no impact on any sample firms in the study. In general, a majority of firms in each of these cases were in compliance with this standard when it was issued.

A different situation existed, however, with regard to the disclosure of depreciation details, as shown in Part B of exhibit 3. When this standard became effective in 1977, the U.K. firms were the only ones near a majority in compliance with it. The overall low levels of compliance with this basic principle of disclosure is surprisingly evident for the period 1975-76. Dramatic improvement is evident only in the case of the U.K. firms, and it is also evident that the standard had no impact on France, Japan, and West Germany. An explanation for the low level of compliance of U.S. firms was a common deficiency concerning the disclosure of the useful lives or depreciation rates.

IASC No. 6, "Inflation Accounting Disclosures"

The results of the analysis of the disclosure of the impact of changing prices on the firms is presented in exhibit 4. As shown, the IASC

Exhibit 4. Compliance with International Accounting Standard No. 6, "Disclosure of Procedures to Reflect the Impact of Price Changes or Disclosure of the Fact That No Such Procedures Have Been Adopted"
(effective for fiscal year ending 12/31/1978)

Year	*% compliance by country*				
	France	Japan	U.K.	U.S.	W. Germany
1975	0	NA	11	11	0
1976	0	0	10	80	0
1977	0	0	44	100	0
1978*	0	11	44	100	0
1979	0	0	60	100	0
1980	0	0	100	100	0

*Year of effect.

standard had no impact in the case of France, West Germany, and the United States. Only in the case of the U.K. firms from 1978 through 1980 and for the Japanese firms in 1978 was there any evidence of an impact. U.S. compliance was affected by the Security and Exchange Commission's Accounting Series Release 190 passed in 1976 and FASB No. 33, effective in 1979. In the United Kingdom, Statement of Accounting Practice 16 on current-cost accounting was issued, effective for 1980. It is significant to note that only in the case of the latter two countries were any disclosures of the impact of inflation presented in the firm's annual reports by 1980.

IASC No. 7, "Statement of Changes in Financial Position"

Exhibit 5 shows the degree of compliance in the sample firms for the IASC standard requiring that a statement of changes in financial position be included as a basic financial statement. As shown by the analysis, this standard had no impact in any of the nations represented by firms in the sample: in no case did the percentage of compliance change. By 1980, a majority of U.K. and U.S. firms presented this statement; otherwise, it was not a majority practice.

SUMMARY AND CONCLUSIONS

Mueller has noted that the IASC attempts to review procedures currently in use in countries around the world and then harmonize them by recommending a limited set of alternatives.[12] The IASC has no

[12] Gerhard Mueller and L. Daley, "Accounting in the Arena of World Politics," *Journal of Accountancy* (February 1982).

"real authority" to implement its recommendations and must rely on the best efforts of its individual members which most often are not the accounting standard-setting bodies of those countries. The current study tends to indicate that the IASC has had very little impact on the accounting practices of the countries surveyed. Except for a few instances, a country following a particular method prior to the promulgation of an IASC standard continued to follow the same practice after the standard's issuance.

Exhibit 5. Compliance with International Accounting Standard No. 7, "Statement of Changes in Financial Position" (effective for fiscal year ending 12/31/1979)

Requires that a statement of changes in financial position be presented as a basic financial statement

Year	*% compliance by country*				
	France	Japan	U.K.	U.S.	W. Germany
1975	40	NA	89	100	11
1976	44	33	100	100	11
1977	40	33	100	100	10
1978	50	33	100	100	10
1979*	50	33	100	100	10
1980	50	33	100	100	10

*Year of effect.

APPENDIX. FIRMS INCLUDED IN SAMPLE

Country	*Firm*	*Principal lines of business*
France	Enterprise Minère et Chimique	Mining, chemicals
	Général Sucriere	Sugar
	Imetal	Mining, metallurgical products
	La Farge Copper	Cement, concrete, sanitary ware
	L'Oreal	Hair care, perfume, pharmaceuticals
	Sacilor	Steel
	Schneider	Heavy industry contractors, nuclear power plants, shipbuilding
	Thomson-CSF	Electronic equipment and components
	Union Laitiere Normande	Dairy products
Japan	Chizoda	Chemical engineering and construction
	Fuji Photo Film Co. Ltd.	Photographic film, cameras, magnetic tape
	Furakawa Electric	Electrical cable and wire
	Idemitsu Kosan Co. Ltd.	Oil products, chemicals, shipping
	Kubota	Agricultural machinery, pipe, building materials, industrial machinery
	Nippon Electric Co. Ltd.	Electronic products, data processing
	Sumitomo Metals	Steel, engineering
	Sumitomo Metal Mining	Metal mining and production
	Toyota Motor Co. Ltd.	Automobiles
United Kingdom	Allied Breweries	Alcoholic and nonalcoholic beverages, food
	Arthur Guiness Son & Co. Ltd.	Brewing, plastics, confections
	Cadbury Schweppes Ltd.	Confectionary, beverages
	Delta	Electrical equipment, metals, plumbing products
	General Electric Co. Ltd.	Manufacture of electrical and electronic products
	Grand Metropolitan Ltd.	Food, beverages, leisure
	ICL Ltd.	Computer systems
	RMC Group	Concrete
	Rolls-Royce Ltd.	Engineering, manufacturing
	The Welcome Foundation Ltd.	Pharmaceuticals, chemicals

Country	*Firm*	*Principal lines of business*
United States	Amax	Mining, energy
	Avon	Cosmetics, jewelry
	Control Data Corp.	Computers, data processing equipment
	CPC International	Foods
	Exxon	Oil, energy
	General Tire	Tires, rubber
	Honeywell	Computers, control systems, electronics
	J. P. Stevens	Textiles
	Lockheed	Aircraft, aerospace, electronics
	W. R. Grace	Chemicals, energy, consumer products
West Germany	Babcock	Power generating equipment and engineering
	Bazer	Chemicals, rubber, pharmaceuticals
	Continental	Tires
	FAG	Bearings, machine parts
	Magirns-Dentz A.G.	Trucks, buses
	Metallgesellschaft	Metals, manufacturing, engineering, chemicals
	Sachs	Manufacturing, motors
	Schering A.G.	Pharmaceuticals, chemicals
	Thyssen	Steel, manufacturing
	Volkswagenwerk	Automobiles

The Financial Function of a U.S. Multinational Company Abroad—A Venezuelan Experience

JUAN M. RIVERA*

VENEZUELA'S ECONOMIC CONDITIONS

General Economic Features

Several features make Venezuela a unique phenomenon in Latin America. Its population of 15 million receives per capita income estimated at $3,130, the highest in the region and surpassed only by that of the United States and Canada in the Western Hemisphere. The economy is heavily dependent on a single commodity, oil, that constitues 96 percent of its total exports and generates 20 percent of the gross national product (GNP).

Venezuela's growth in GNP averaged an annual 5 percent in the early 1970s. During 1976-77, annual growth peaked at 7.8 percent, as a direct result of increased oil revenues. However, since 1978, the growth of GNP slowed to a 4 percent average annually, although still above the 3.4 percent growth in population.[1]

Bolivar, the Venezuelan currency, has sustained a strong position and enjoys free convertibility backed by Venezuela's healthy international reserves. The country's rate of inflation was at an annual average of 5.8 percent during the 70s, jumped to 12.3 percent in 1979, and has been estimated at 20 percent thereafter. The manufacturing sector contributes 17 percent to GNP which is proportionately one of the lowest in the region. Sixty percent of the Venezuelan population lives in cities

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[1] Inter-American Development Bank, *Economic and Social Progress in Latin-America, 1979 Report* (Washington, D.C.: Inter-American Development Bank, 1979), p. 12.

of 100,000 inhabitants or more. High human concentration exists in Caracas and adjacent areas while half of the territory is uninhabited and partially unexplored.

Venezuelan Industrialization

The exploitation of petroleum resources in the 1920s set the stage for modern Venezuela. However, it was not until the late 40s and early 50s when the present industrial configuration of Venezuela started to take shape.[2]

Its geographic proximity and its proven available technology made the United States a natural partner in Venezuela's trade and industrialization. A commercial agreement signed in 1939 gave the United States preferential import duty treatment for approximately 200 products in a variety of fields. In 1958, the Venezuelan government implemented some protectionist policies to funnel industrial development. It increased import duties for manufacturing products and set some restrictions for importation of items covered in the U.S. trade agreement. At the same time, machinery and raw materials were granted duty exemption, and new moneys from oil taxes were channeled to finance industrial projects. It was in this period that many of the U.S.-owned manufacturing plants were installed.

Most of the industrial sector in Venezuela is of the traditional type, concentrating in production of consumer goods (soaps, detergents, toiletries, comestibles, beverages, and such). This type of industry represents approximately 60 percent of the manufacturing sector in Venezuela. The remaining portion is composed of 37 percent in intermediate goods and 3 percent in capital goods.

Manufacturing in Venezuela is strongly dependent on foreign supplies. Local operations are involved primarily in the final stages of manufacturing, such as mixing, finishing, and/or packaging. Still, local production has not been sufficient to satisfy aggregate domestic demand.

Attempts for Regional Integration

When the Latin American Free Trade Association (LAFTA) was created in 1960, Venezuela did not join it due mainly to pressure from the local private sector that feared increased competition from more efficient Latin American manufacturing countries. Venezuela eventually joined LATFA in 1966, although by then the national interests of LAFTA countries had overpowered the regional wishes for integration.[3]

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[2] See Orlando Araujo, *Situación Industrial de Venezuela* (Caracas: Ediciones Biblioteca, Universidad Central de Venezuela, 1969).

[3] See Loring Allen, *Venezuelan Economic Development: A Politico-Economic Analysis* (Greenwich, Conn.: JAI Press, 1977), pp. 92-93.

Stronger trade barriers were imposed as a result of Andean Pact regulations. Initially, when the Andean model for regional integration was established in 1969, Venezuela's entry was barred due to its continuing trade agreement with the United States. Finally, in 1972, when time came to renegotiate the U.S. trade agreement, Venezuela decided to suspend it. The same year, Venezuela joined the Andean Common Market (ANCOM). A flow of additional protectionist policies ensued. A revamping of the import duty system occurred, along with a strengthening of the administrative apparatus to enforce its observance. Heavy duties on final and semi-manufactured products, except for those from ANCOM members, were imposed. Tariffs were lowered for intermediate and capital goods, and imported materials used as input in local manufacturing were eliminated or kept at minimum levels. Even with all these protectionist measures, the United States continued being Venezuela's main trade partner. In the mid-70s, 47 percent of total Venezuelan imports were provided by the United States. Compared to this, of the total Venezuelan trade, only 6 percent of exports and 9 percent of imports were made with Venezuela's Latin American neighbors.[4]

Financial Effects of the Andean Pact

The application of the Andean Pact's rulings restricted new foreign investments. Those foreign-owned companies established in Venezuela before January 1, 1974, could remain foreign but would not have the benefits of trade in the Andean Common Market.

Profit remittances of foreign-owned companies are limited to 25 percent of registered capital and are subject to a 20 percent withholding tax. Changes in capital structure must be approved by the Superintendency of Foreign Investments (SIEX), an organism created in 1974 to register, monitor, and approve foreign investments. Transfer of technology contracts must also be sanctioned by this agency.

Remittances of royalties and technical service fees are prohibited if the company receiving the services is owned 50 percent or more by the supplier of those services. Foreign interests could still invest via joint ventures with local partners as long as foreign investment is less than 20 percent in the formed company.

THE FINANCIAL FUNCTION IN A U.S. COMPANY'S FOREIGN AFFILIATE

Compliance with Local Financial Requirements

A multinational company located in Venezuela is subject to multiple

[4] Ernst & Ernst, *Venezuela: Ernst & Ernst International Series,* No. 48454 (New York: Ernst & Ernst, 1979), p. 1.

information requirements, some of them derived from its incorporation as a Venezuelan company and some due to its foreign nature.

The Sociedad Anonima or stock company is a popular form of business incorporation in Venezuela. Most of the U.S.-owned affiliates in existence before the Andean Pact were established with this type of organization. Legal aspects of a stock company are regulated by the Venezuelan commercial code (Código de Comercio) of 1919 and its amendments.

The Venezuelan commercial code requires companies to keep at least three accounting records: an "inventory" book, a journal, and a general ledger. The inventory book contains the end-of-the-year financial statements and summary of inventory and assets.

Each stock company must have an annual shareholders' meeting when discussion of financial reports and results of operations takes place. The financial statements then presented should be reviewed and approved by a "commissar," a sort of statutory auditor who has responsibility to review whether proper accounts were used. The commissar presents a written report that for practical purposes is similar to an auditor's opinion. The financial statements along with the commissar's report are to be filed annually with the commercial registrar. If a company is foreign owned, it must file copies of its financial statements and its annual stockholder's meeting also with the Superintendency of Foreign Investments.

Control over a company's reporting is also exercised by the Venezuelan Central Bank. Foreign-owned companies must submit monthly balance sheets to the Central Bank. Noncompliance with this requirement could incur costly inconveniences, such as freezing of the company's checking accounts.

Importers of materials in Venezuela should present complete invoicing documentation for total imports of a given year to the tax authorities. Based on the variety of its suppliers, the company is assessed an annual percentage fee to be applied on its imports.

Financial Information for Price Approvals

The Venezuelan economy operates with a system of price controls. Prices are government fixed at the final consumer level and cover most food staples, machines, fuel, automobiles, taxi fares, fertilizers, and so on. At the other end, minimum wages are also set by the government yearly.

For a company within a price-controlled industry, it is extremely difficult to obtain increases in prices to compensate for increments in

cost inputs. Applications for price increases are presented to the Ministry of Development and must be substantiated and documented with cost data for each product presentation. The review process in the ministry has traditionally taken six months. In the last years, the government has tried to restrain and limit price increases of those goods subject to control as a means to ameliorate the unusual inflation observed in the country.

Recently the Ministry of Development has followed the practice of standardizing the proportion of labor and overhead contents of products and applying available arms-length transaction prices for raw materials supplied from the parent company when comparing and judging the validity of a price increase application.

Limitations on Local Financing

If a company is controlled 50 percent or more by a foreign interest, limitations for local financing do exist. Apart from local suppliers' credit, the only source of local financing permitted is from local banks on a short-term basis, normally three months. The maximum amount that can be obtained from this source is the equivalent of 40 percent of paid-in capital, legal reserves, and retained earnings. The interest rates charged by Venezuelan banks for these short-term loans are regulated by the Central Bank and consist of a 2 percent above a reference (premium) rate.

Since repatriation of earnings is limited to a net 20 percent of foreign investment, a company might accrue unremitted profits into retained earnings. This accrual is made after separating 5 percent of profits to increase the legal reserve. The leftover amount in retained earnings, known as "limbo" money, could be used as a basis for reinvestments by the foreign company. Within certain prerequisites, a 15 percent investment tax credit is available and usable for up to three years from the time the investment takes place.

Local Taxation

The largest portion of taxes in Venezuela is collected by the federal government. Income tax rates for both companies and individuals in Venezuela are comparatively lower than those typical in other Latin American countries. On the average, a company pays taxes equal to 32 percent of its profits. Personal income taxes at an average 8 percent in Venezuela are still considered among the lowest in the world.

The present income laws were reviewed and enacted in 1967. Some particular items deserving attention are the following:

1. Under Venezuelan law, capital gains and losses are not given separate consideration.
2. Bad debts are not deductible under the allowance method.
3. Losses may be carried for three years, but there is no carryback.
4. Valuation of inventories is made on an average or FIFO basis.

The Venezuelan government has instituted a series of measures to enforce compliance with income taxes. A company that has had 100,000 Bolivares or more in profits must compute estimated income taxes for the following year and make four payments of estimated tax liability. Stiff penalties are assessed when taxes are not paid or are fraudulently underestimated. In addition to the interest on unpaid amounts, fines could go up to 200 percent of unpaid taxes.

An indispensable document a company should always have in Venezuela is the tax clearance certificate (solvencia). This is issued upon request by the Income Tax Administration every two or three months and certifies the company is up-to-date with its tax obligations. A tax clearance is required to conduct business with federal or local government units, to participate in bids for government contracts, to apply for import licenses, construction permits, investment projects, and, in general, when registering or authenticating documents with government agencies.

An educational tax equivalent to 2 percent of total gross salaries is also levied on corporations. Proceeds from this tax are allocated to the National Institute of Cooperative Education, a government institution that provides free training in commercial and technological trades and which was created to alleviate the urgent need for skilled personnel.

Local Labor Costs

A series of mandatory fringe benefits (paid vacations, holidays, profit sharing, contribution to savings, educational tax and so on) add approximately 50 percent to normal payroll costs. The profit sharing is equivalent to 10 percent of annual profits but not to exceed two months' salary. This benefit is included in annual salaries as an additional two-month payment since most companies do not want to open their financial records and discuss profit sharing levels with their workers' representatives.

Companies in Venezuela do not have an institutionalized pension plan system. The only pension received by retirees comes from the Social Security Institute, but that amounts to a very small portion of the normal salaries. Instead, when an employee leaves the company, he is entitled to a severance payment composed of two parts: a service

indemnity and a severance indemnity, each consisting of fifteen days of the final salary for each year of service. If separation is not by resignation, the worker can always claim "unjustified" dismissal, in which case the company must pay double indemnity — two months' salary for each year of employment.

For financial reporting, the company accrues the single indemnity payments and presents them as current liabilities. Additional accruals could be recorded based upon the company's prior experience. No requirement exists for funding this liability.

Financial Requirements for Parent Company's Needs

The financial officer of a U.S. company's foreign affiliate must constantly blend financial abilities with managerial skills. As part of the management team of a smaller-sized company where all business functions are at stake (sales, production, personnel, finance), the financial officer participates more actively in business decision making. However, he or she can never overemphasize the demands of financial information, and is the only one responsible for supplying it.

Annual Plan and Quarterly Forecasts

The annual budget is an essential exercise of the affiliate. Activities related to the annual plan begin in July. These involve making the various areas of the company aware of the segments of the plan for which they are responsible. It has proven convenient for the finance director to "educate" the other segments as to contents of items in the forecast and even concerning ways to prepare the estimates.

Periods covered in the annual profit plan submitted in September are the four quarters of the coming year. Emphasis at both the affiliate level and headquarters is on the budgeted income statement and its components. Account balances at the end of each budgeted quarter are sent normally by Telex transmission directly to the computer processor at the parent's office, where local and consolidated statements are prepared.

After a headquarter's evaluation or on-the-field assessment of the submitted plan, possible adjustments designed normally to improve expected performance occur. Then, and only then, the plan becomes final. Additional forecast activities occur on a smaller scale in April and June when estimates for the rest of the year are prepared.

Periodic Financial Reporting

The monthly submission of actual financial statements which are consolidated on a company-wide basis at the parent's offices are essential to

the operation of a U.S. company's affiliate. Information is prepared by segments of activities and includes all accounts used at the affiliate's location which also match with those individual accounts listed in the plan. Prior to calculating the actual figures, a quick estimate of the principal income accounts is sent on the last working day of the month. This provides the expected monthly performance of the affiliate at a glance. As it is with all financial data, information is Telex-transmitted using coded account terminology.

End-of-Year Closing and External Audit

A recurrent activity in a foreign affiliate is the annual external audit. Preliminary review of the books and evaluation of internal controls start approximately four months before the year-end closing. The major part of the revision occurs in the last two months of the company's accounting period. The external audit is performed by the local counterpart representatives of the U.S. accounting firm appointed to audit the parent company. At the end of the year, a number of schedules and account analyses are mailed to the parent company. These provide sufficient documentation to support company-wide consolidation and notes to the audited financial statements.

Internal Control Measures

A standard chart of accounts developed by the parent company is normally found and applied in the affiliate. The accounting system in use could be more or less computerized, depending on the affiliate's volume of operations. Corporate policies relating to internal control measures are publicized and distributed for observance at the affiliate's level. These policies are a good manual to follow and assure correct safeguarding of the company's assets and appropriate controls.

PROBLEMS AND LIMITATIONS IN FULFILLING THE FINANCIAL FUNCTION

Insufficient Accounting Professionals

Even as early as 1961, a World Bank's Commission to Venezuela identified an inadequate labor force and recommended full attention to improve its skills.[5] As a noted Venezuelan economist has stated, Venezuela faced industrial development without technicians, without experienced workers, and almost without managers.[6] Since then, the situation has improved, but there is still an insufficient and poorly trained labor force.

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[5] International Bank for Reconstruction and Development, *The Economic Development of Venezuela* (Baltimore: Johns Hopkins Press, 1961), pp. 202-3.
[6] Araujo, *Situación Industrial,* p. 21.

A lack of accounting professionals is apparent in Venezuela. The profession is accredited through a four-year college program but in the schools of business of the eight Venezuelan universities, only a few students select accounting as a major. Most of the students enroll in economics or business administration instead. The accounting profession is not adequately organized either, and the only public image of its existence is given by the local accounting firms, some representing U.S.-based accounting organizations.

As a whole, the educational system in Venezuela is plagued with recurrent problems: inadequate selection of entering students in freshman levels, concentration on areas of study not geared to the country's economic needs, university teaching as a part-time occupation, and a high rate of dropouts. To an increasing degree, technical training is available. Commercial schools of the vocational type have served to fill the gap and normally train individuals to be useful in clerical accounting positions. Also, a new breed of Venezuelan nationals has appeared in the labor market. They consist of scores of students who received advanced education abroad as part of a government-sponsored program initiated in 1976.

Lack or Misfunctioning of Essential Operating Services

The constant misfunctioning of basic public services is a fact that hinders the development of business operations in Venezuela and even jeopardizes the possibilities of development of the country. Breakdowns of telephone and Telex lines, electric blackouts, absence of trash collection, occasional gasoline shortages, water shortages, slowness of mail delivery, and so on, are all part of the Venezuelan way of life. Indeed, the financial officer, as well as other managers of businesses in Venezuela, must cope with these impediments to a good performance.

The whole telephone system in Venezuela, which is provided by a government-owned company, is particularly unreliable. Long-distance calls are extremely difficult to make, and costly delays are common. Only about a dozen spotted areas have direct dialing facilities for international long-distance calls. Most of these calls must be conducted through telephone operators in Caracas. Since Telex communication also utilizes telephone lines, its service is also frequently interrupted.

PERFORMING THE FINANCIAL FUNCTION ABROAD — AN AREA FOR IMPROVEMENT

The two most crucial elements for a good performance of the financial function in a U.S. company's foreign affiliate are a good accounting

system and well-trained financial personnel. It was mentioned earlier that lack of sufficiently skilled people is endemic in Venezuela. Notwithstanding the efforts made directly by the government, the business community in Venezuela should emphasize in-house training for its personnel. Since training and development normally begin with the financial officer, a recommended plan of action for the development of this officer is advisable. Some attempts to help in this planning have been offered before.[7] Use of foreign U.S. nationals in heading the financial function might provoke feelings of blocked professional development for local nationals aspiring for the post. If local talent is found, the foreign financial officer should work also on developing and grooming a successor.

A new source of trained people is presented by the Venezuelan students who are earning MBA degrees in the United States. U.S.-based companies have competed for this talent to transplant back to Venezuela. It is recommended that selected individuals be assigned for a training period in the headquarters' offices. This will introduce the individual to procedures, techniques, and personnel that would be beneficial once the employee begins employment in the affiliate.

Another option that has not been normally taken is to bring the local nationals to the main office for a given period or to assign them temporarily to a larger affiliate. This could also provide good training if properly administered and monitored.

Finally, U.S. business schools, particularly those where the foreign population represents a significant proportion of the student body, should offer courses in international topics with a pragmatic approach and which deal with the study of those variables that configurate the particular foreign environment. Only by emphasizing this will those professionals be better qualified to deal with those variables once they are employed in their respective real worlds.

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[7] Business International, *Developing Management for the Worldwide Enterprise* (New York: Business International, 1965).

The Gearing (Leverage) Adjustment: A Historical and Comparative Analysis

ROBERT H. RAYMOND, M. ZAFAR IQBAL, and ELDON L. SCHAFER*

Several countries of the British Commonwealth group include a "gearing" ("leverage" in American terms) adjustment in their changing prices standard. However, the adjustments of no two countries are identical. New Zealand has just abandoned its voluntary guidelines and adopted a mandatory standard (CCA-1) that closely follows the United Kingdom's Statement of Standard Accounting Practice (SSAP) 16. The primary difference between the New Zealand standard and SSAP 16 occurs in the calculation of the gearing adjustment. Canada recently re-exposed its proposed standard, bringing it closer to the statement of Financial Accounting Standards (FAS) 33 of the Financial Accounting Standards Board (FASB) but retaining a "financing adjustment" similar to the U.K. gearing adjustment. In the Netherlands, Philips extensively revised the format of its 1981 annual report. Major changes include addition of a gearing adjustment. In the United States, spokespersons for the FASB, when commenting on its promise to review FAS 33 comprehensively before 1984, make it clear that the FASB is aware of the gearing adjustment. The future of gearing-type adjustments is still uncertain, but they clearly have the attention of standards promulgators.

Without taking a position either for or against the desirability of a gearing adjustment, this paper traces its history, compares the specific

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adjustment in the standard or proposed standard of several countries, and lists arguments for and against the concept.

PREDECESSOR IDEAS

The first proposed standard to include a gearing adjustment was apparently the Richardson Report in New Zealand, but the underlying concept had been suggested a few months earlier in an article in *The Times* (London) and has some commonalities with the "substantialistic" method contained in a 1974 German proposal. There is no evidence that the Richardson Committee drew on these slightly earlier proposals but, even if committee members or supporting staff had read *The Times* article and the German proposal, it was that committee which used the idea in an innovative way to give a practical answer to a vexing problem. Other British Commonwealth countries soon proposed variants, and nearly all presently include some form of gearing adjustment in their changing prices standard.

Before examining the specifics of the gearing adjustments portion of some of these standards, a brief review of events that led to the generation of the gearing adjustment idea should be helpful. Replacement cost discussions in the United States began during nineteenth century debates between the railroads and the Interstate Commerce Commission. Index-adjusted accounts were suggested as early as 1918 by Livingston Middleditch in an article in the *Journal of Accountancy.* German scholars trying to cope with the super inflation besetting that country following World War I developed an approach that was popularized and circulated in the English-speaking countries in a series of publications by Henry W. Sweeney between 1927 and 1936. Certain companies in Holland, by contrast, developed a replacement cost system. These companies were influenced by Theodore Limperg, a prominent Dutch accountant originally trained as an economist. Academicians discussing the subject tended to concentrate on general price-level adjustments for several years but gradually shifted, with notable exceptions, toward research on replacement cost concepts. Others, of course, stressed the strengths of historical cost and asked to be shown evidence that improved decision making would likely result if the impact of changing prices was brought into the accounts.

In the early 1970s, accounting standards promulgation bodies in many English-speaking countries issued standards calling for supplemental financial statements adjusted for general price-level changes. Most were little different from the ideas popularized by Sweeney, whose 1936 book, incidentally, went out of print only to be reissued later as a

classic. Several Latin American countries adopted comprehensive price-level adjustment standards, but they had little direct effect on generation of the gearing adjustment idea.

Australia may have precipitated the chain of events that led to the system which a gearing adjustment fits. In May 1975, a special committee headed by R. L. Mathews, a professor of accounting and public finance, issued a report calling for current-cost measures for taxation based on a presumption that they would then also be used in accounting.[1]

One development outside the British Commonwealth group of countries should be mentioned. An article in the May 1975 issue of *Accountants Magazine* brought what has been called the German "substantialistic" proposal to the attention of British accountants. In that article, emphasis was placed on provisions based on the contention that, in order to gain information on the true profit, enterprises should "determine the amount of profit that is needed to preserve the operating capacity capital."[2] The term "substantialistic" stems from a stated objective of "preserving the substance of the entity." So far, this sounds like discussion of capital maintenance, but only a partial correction was called for if fixed assets and inventories were only partly financed by equity. Therein lies the essence of the gearing adjustment.

The German proposal was a replacement cost method, with replacement cost determined by applying specific indices to the historical cost of fixed assets and using present cost for inventories. Monetary items were not to be adjusted, but the elimination of part of the correction for the portion financed by liabilities had some of the same effect as recognition of purchasing-power gain on net monetary liabilities.

The German proposal was apparently used by the International Accounting Standards Committee (IASC) in a model developed to facilitate evaluation of alternatives for an international accounting standard, and in turn by the authors of a study reported in *Financial Executive*.[3]

THE GODLEY AND CRIPPS SUGGESTIONS

In Great Britain, as in many countries, several decades of discussion culminated in a specific proposal for general price-level adjusted sup-

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[1] Committee of Inquiry into Inflation and Taxation, "Inflation and Taxation," May 1975.

[2] Hank Volten, "Get Ready for 'Substantialistic' Profit Correction," *Accountant's Magazine* (May 1975): 173-75.

[3] Eugene J. Minahan, Harold S. Schultz, and James I. Williams, "How Would Inflation Accounting Affect You?" *Financial Executive* (May 1977): 24-33.

plementary financial statements in the early 1970s. In March 1971, Sir Henry Benson, past president (1966-67) of the Institute of Chartered Accountants in England and Wales (ICAEW), and now advisor to the governor of the Bank of England, wrote to the president of the ICAEW urging that the institute take the lead in urgent consideration of the question of financial administration and accounting under inflationary conditions.[4] Action was prompt, culminating in publication of an exposure draft (ED 8) calling for supplementary financial statements adjusted for changes in the price level in January 1973 with a comment period open until July 31, 1973. Apparently, governmental officials felt that the general price-level adjustments recommended in ED 8 were an inadequate response to the charge in Sir Henry Benson's letter. Shortly before the expiration of the ED 8 comment period, key persons at the ICAEW were called to the Department of Trade and Industry and told of the intent to form what came to be known as the Sandilands Committee, which was created and active in its deliberations by December. Only three chartered accountants were included in the thirteen-person membership of the committee.

Meanwhile, the accounting profession moved ahead with its general price-level adjustments proposal (termed CPP — current purchasing power). It was issued in May 1974, but in deference to the ongoing studies of the Sandilands Committee, as a provisional standard (PSSAP 7) rather than as a full SSAP.

The Sandilands Committee Report, published in September 1975, was promptly accepted by the government. Responsibility for implementation was delegated to the accounting profession. The report rejected both traditional historical cost accounting and general price-level adjustments, demanding instead current-cost valuation. Specifically, the report called for abandonment of historical cost financial reports in favor of (1) a balance sheet showing assets at their value to the business, a deprival value concept; (2) a profit and loss account (earnings statement) in which depreciation was to be based on the value to the business figures used in the balance sheet, and cost of sales was to be adjusted to current cost; and (3) a summary statement of total gains and losses during the year. Except for depreciation expense for the year and the cost of sales adjustment, adjustments were to be made to special stockholders' equity accounts rather than being run through the profit and loss account.

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[4] C. A. Westwick "The Lessons to Be Learned from the Development of Inflation Accounting in the UK," *Accounting and Business Research* (Autumn, 1980): 356.

Bearing in mind that the British accounting profession issued PSSAP 7 while the Sandilands Committee was meeting and that the Accounting Standards Steering Committee made several submissions to the Sandilands Committee,[5] it is noteworthy that no adjustment for gains and losses from holding monetary assets and liabilities was included. PSSAP 7 and corresponding standards in other countries generate that gain or loss as a prominent feature. It is one of the selected items that must be reported under the FASB's FAS 33.

The monetary items issue became the focal point for a series of conceptual articles in *The Times* almost immediately. Martin Gibbs, a chartered accountant who heads the research division of Phillips & Drew, Stockbrokers, contributed the first one less than two weeks after the Sandilands Report was published. Titling his article "Why Sandilands is Not the Full Answer," he noted that the Sandilands proposal "generally gives too pessimistic" a view of earnings because "unlike the current purchasing power method recommended by the accounting bodies, it ignores the very real gain from the reduction in the value of a company's net monetary liabilities during a period of high inflation." Gibbs concludes this piece with a call for a combined system of current-cost principles and a general price-level adjustment. His contentions were supported with comparative estimates of the effect of Sandilands and the effect of CPP on the previous year's earnings of his company's group of leading companies. Most significantly, he then proceeded to demonstrate his proposal with a simple and realistic set of tables. These tables are reproduced with minor Americanization of wording in Appendix A and serve as a basis of comparison for several proposals discussed later in this paper. Similar illustrations can now be found in many of today's textbooks. Gibbs' list of claimed advantages for the combined system he recommended (column 4, Appendix A) included:

1. Operating earnings are after allowing for maintenance of actual assets employed. (Remember, he was writing when capital maintenance concepts were largely an academic concern.)
2. Measurement is in terms of year-end purchasing-power units.
3. Holding gains are real because the general inflation element is removed.
4. Gains/losses on holding monetary items is included.

Gibbs' proposal was probably too complex for general adoption in annual reports by companies at that time, but it put a user orientation in

[5] Ibid., p. 360.

front of those debating the merits of the Sandilands Report and provided an example with a realistic capital structure assumption.

Just a few days later, *The Times* published an article by two members of the applied economics faculty of Cambridge, Wynne Godley and Francis Cripps. It referred to a joint article with Adrian Wood the preceding autumn (before publication of the German proposal), used the numerical examples from Gibbs' article, thereby avoiding Sandilands' extreme assumption of all equity and the equally extreme assumption of all debt in their article with Adrian Wood, and claimed they had a solution that was simple, and used a definition of money and real profit that is more appropriate than in any of the methods demonstrated by Gibbs.

The Godley and Cripps examples are recast into a transactions format in Appendices B and C. Appendix B reflects stage 1 of their argument and begins by tracing how Gibbs arrived at the Sandilands version of current cost in Column 3 of Appendix A. The last two columns of Appendix B incorporate the Godley and Cripps suggestion that a more meaningful measure of profit is the amount that could be distributed and still keep the "gearing ratio" of liabilities to the current cost of assets the same as at the beginning of the year.

This involves buying fixed assets in an amount equal to depreciation and borrowing enough to maintain the gearing ratio after distributing the borrowed amount as a dividend.

After demonstrating what they perceive as the conceptual validity of the amount borrowed, Godley and Cripps move to the primary area of interest: an alternative method to obtain the same result in a simple, straightforward manner by means of a gearing adjustment. Their demonstration, again recast in a transactions format — this time the CC-CPP set that Gibbs recommended over the Sandilands current-cost measure — comprises Appendix C. The innovation consists of a simple bookkeeping entry transferring 27 percent (the beginning gearing ratio) of the amount required to bring fixed assets and stocks of goods held for resale, after adjusting for general inflation, and all the adjustment to net monetary items into operating income. The results are identical to Gibbs' CC-CPP statements, as demonstrated by reproduction of his column 4 from Appendix A at the extreme right of Appendix C. Rather than work through the Appendices, readers might prefer to note that the $157 operating earnings can be derived in exhibit 1, which is similar to the one used in later gearing adjustment promulgations.

Exhibit 1. Godley and Cripps Gearing Adjustment

Sales, less out-of-pocket costs		$220
Depreciation		(150)
Gain from fall in the real value of net monetary liabilities		60
Portion of holding gains financed by borrowing		
Holding gains per Gibbs (CPP)		
Stocks of goods for resale	$ 40	
Fixed assets	60	
Total	$100	
Ratio of liabilities to assets in Gibbs' opening balance sheet ($400/$1,500)	27%	
Portion to be taken into income — 27% of $100		27
Current-cost operating income		$157

Source: Derived from example in *The Times* (London), 1 October 1975.

Gibbs quickly acknowledged the Godley and Cripps contribution, began incorporating it into his discussions, almost as an accepted technique, and turned his attention to receivables and payables. By February 23, 1976, he recommended in an article in *The Times* "an index-based adjustment for trade debtors less creditors, followed by a *Godley-Cripps gearing adjustment for the net borrowings*" (emphasis added).[6]

PROFESSION'S RESPONSE IN THE UNITED KINGDOM

Concurrently with ongoing debate in the press, which included the Gibbs and the Godley and Cripps articles, the Accounting Standards Steering Committee was working feverishly. Initially, it guardedly welcomed the Sandilands Report but noted, in a report published by the Consultative Committee of Accounting Bodies, several deficiencies, including failure to recognize the effects of inflation on monetary items. A combination of current-cost accounting (CCA) with an element of current purchasing power was suggested.

Since the six professional accounting organizations represented on the Consultative Committee were thereby committed to development of the implementation standards, no time was lost in appointing a special Inflation Accounting Steering Group (IASG). Headed by Douglas Morpeth, the committee was asked to include not only the

[6] As paraphrased by him in "Implementing the Hyde Guidelines," *Management Decision,* vol. 16, no. 8 (1978): 4.

Sandilands recommendation but also to consider "comments made on the Sandilands Report by the accounting profession and others."[7]

ED 18

These comments were eased into the exposure draft generated by the committee (ED 18, November 1976) primarily by creation of an appropriation account to which directors should transfer from the revaluation surpluses and, if necessary, out of current-cost profit, an amount based on their assessment of the needs of the business. These needs were to include provision for the effect of inflation on monetary items, gearing, and backlog depreciation. In addition to inclusion of the appropriation account in the annual accounts (annual report), disclosure was to be made of gains and losses on monetary items and the effect of change in the value of the monetary unit on the net equity interest.[8]

The guidance notes (manual), which traditionally accompany British standards, suggest that reporting the effect of the equity interest be accomplished by adjusting the beginning balance plus new equity capital during the year by "the amount needed to compensate these amounts for the change in the value of money during the period."[9]

Response to ED 18 was overwhelming. Over 700 letters of comment were received. C. A. Westwick, who served as technical liaison officer of the Sandilands Committee and as secretary of the Morpeth Committee, among other crucial posts, notes that the IASG published its response to these comments in May 1977 and indicated that it intended to simplify, produce simple guidelines for the smaller company, defer the implementation date, hold public hearings, make the CCA figures supplementary, and improve the treatment of monetary items. The latter two are particularly noteworthy. Even more significant for this paper is his observation in the same article that "our thinking on monetary items had progressed away from the appropriation account idea towards a 'gearing adjustment.' "[10]

Hyde Guidelines

The IASG's intent to make CCA supplemental, improve the treatment of monetary items, and include a gearing adjustment was not to be. A resolution "that the members of the Institute of Chartered Ac-

[7] Westwick, "Lessons to Be Learned," p. 362.

[8] Par. 77, ED 18.

[9] Inflation Accounting Steering Group, Institute of Chartered Accountants in England and Wales, *Guidance Manual on Current Cost Accounting* (London: ICAEW, 1976), par. 19.1.

[10] Westwick, "Lessons to Be Learned," p. 364.

countants in England and Wales do not wish any system of Current Cost Account to be made compulsory" passed by a narrow margin at a special meeting on July 6, 1977. Following that meeting, the IASG announced interim plans to issue a simple set of voluntary guidelines that could be followed in reports for years ending after December 31 of that year. These guidelines were to include only three adjustments: cost of sales, depreciation on a current-cost basis, and gearing. The latter undoubtedly drew on the innovative provisions of New Zealand's Richardson Report, which had been "tabled" by Parliament in September 1976 and was published for general distribution in December of that year. Those provisions should be noted before examining the Hyde gearing adjustment.

NEW ZEALAND'S RICHARDSON REPORT

In common with the accounting profession in many countries, New Zealand's Society of Accountants published Exposure Draft 10 calling for general price-level adjustment supplementary statements in 1975. It closely followed the United Kingdom's provisional standard, PSSAP 7. In December 1975, a five-member committee chaired by I. L. M. Richardson was formed. None of the members of the committee were accountants, but many members of the supporting staff were selected from the practicing profession, and the New Zealand Society of Accountants made several submissions. The approach adopted was one of seeking the widest range of views as to the accounting system best suited to meet New Zealand's needs. Public hearings were not held, but advertisements were inserted in the daily newspapers and in many professional and commercial publications inviting comment with over eighty specific invitations to organizations and individuals including professional, commercial, and financial organizations; government departments and agencies; employer and employee organizations; and university departments. The Sandilands Report and, to a lesser extent because it was concerned with taxation questions, Australia's Mathews Report were used as a starting point.

ED 10 was withdrawn in March 1976. A current-cost exposure draft (ED 14) was issued in August 1976, although the Richardson Committee was in session and nearing the end of its work. This draft was withdrawn in March 1977 when the Society of Accountants informed the government that it found most of the Richardson Committee recommendations acceptable.[11]

[11] "Submissions on the Report of the Committee of Inquiry into Inflation Accounting," *Accountants' Journal* (New Zealand) (May 1977): 153-56.

Two primary innovations were adopted by the Richardson Committee. First, monetary assets were divided into "circulating monetary assets" and "fixed monetary assets." Circulating monetary assets include cash, bank deposits, and trade accounts receivable that are employed in the ordinary course of business and cannot be removed from operations without impairing the productive capacity of the enterprise. An index was to be used to measure the loss in the value of these assets to the extent that inflation adversely affects the operating capacity of these funds.

The second innovation was the introduction of the gearing adjustment and, through it, derivation of two profit measures: current-cost profit of the enterprise, and profit attributable to the owners. Transition from the first measure to the second involves deducting interest and adding or deducting, as the case may be, the gearing adjustment. That adjustment is computed as follows:

$$\frac{\text{average borrowings}}{\text{average total assets}} \times \begin{array}{l}\text{net change for the period in}\\ \text{the capital maintenance reserve}\end{array}$$

During the time of rising prices, this adjustment offsets, in part, the cost of sales, depreciation, and circulating monetary asset deductions that were made in calculating the current-cost profit of the enterprise.

To illustrate, in a study in which various changing prices standards were applied to the financial statements of an American corporation, the 1976 income statement under the Richardson Report shows, in part:

Total current-cost profit of the enterprise	$55,993,000
Less interest costs	3,666,000
	$52,327,000
Add movements in the capital maintenance reserve financed from borrowed funds	3,048,000
Profit attributable to stockholders before tax	$55,375,000[12]

One must assume that the Richardson Committee, or at least staff members, had read the Gibbs, and the Godley and Cripps suggestions in the London *Times*. Even if that is so, the committee must be given credit for applying the concepts in an innovative and practical context. Furthermore, Richardson has indicated that both (1) the identification of a current-cost operating profit of the entity and a profit attributable to the owners, and (2) the treatment of monetary items were "based on

[12] M. Zafar Iqbal, *Comparison of the Alternatives Proposed in Selected Countries to Cope with the Impact of Changing Prices on Published Financial Statements* (Ph.D. Dissertation, University of Nebraska, 1979), p. 139.

our own thinking."[13] In developing the former, the committee noted particularly that some of the Sandilands discussion of capital maintenance related to the position of the investor while others centered on the enterprise.

In adapting Sandilands and Mathews to the New Zealand situation, the handling of monetary items was especially troublesome to the committee. The concepts included in their report were developed through internal working papers and analysis over a period of months, according to the Right Honorable Mr. Justice Richardson, as he should presently be addressed in his capacity as judge in the Court of Appeal of New Zealand.

DEVELOPMENT SINCE 1976

Detailed tracing of all the specific steps through which the gearing adjustment moved from its origination to its present fluid status is beyond the scope of this paper. A summary reflecting the highlights of what has happened is presented in exhibit 2. The reports, standards, and proposed standards that were studied in the research for this paper are listed in chronological order from left to right, starting with three that could be labeled "pre-gearing adjustment," and ending with the New Zealand standard that was released in March. The top portion of the exhibit indicates the numerator and denominator used in computing the gearing ratio. The height or depth of the bar graph in each instance is designed to indicate the relative size or scope of the figure used. For example, the numerator bar for the Richardson Report is higher than the bar for New Zealand's CCA-1 because the latter uses net monetary working capital whereas Richardson uses circulating monetary assets. This means that current monetary liabilities have been subtracted and the total figure is less. The denominator is, of course, correspondingly smaller, and the depth of the denominator bar is less for CCA-1 than for the Richardson Report.

The bottom portion of the exhibit is designed to reflect the relative size or inclusivity of the adjustments to which the gearing ratio is applied. The adjustments are listed at the left of the exhibit with the most universally included adjustments at the bottom. The height of the bar indicates which adjustments are included. For example, in the Hyde recommendations, there are only two adjustments other than gearing: a cost of sales and a depreciation adjustment. SSAP 16 includes a third — a monetary working capital adjustment — and the height of the bar is correspondingly greater.

[13] Letter to R. H. Raymond, 2 February 1979.

Exhibit 2. Comparison of the Elements of the Gearing Adjustment in Several Reports, Standards, and Proposed Standards

<table>
<tr><td>Identification</td><td>Mathews Report</td><td>Sandilands Report</td><td>ED 18</td><td>Richardson Report</td><td>Ontario Committee</td><td>Hyde Interim Guidelines</td><td>OU 1</td><td>SSAP 16</td><td>ED 25</td><td>Changing prices re exposure</td></tr>
<tr><td>Country</td><td>Australia</td><td>United Kingdom</td><td>United Kingdom</td><td>New Zealand</td><td>Canada</td><td>United Kingdom</td><td>New Zealand</td><td>United Kingdom</td><td>New Zealand</td><td>Canada</td></tr>
<tr><td>Date announced</td><td>May 1975</td><td>Sept 1975</td><td>Nov 1976</td><td>Sept 1976</td><td>June 1977</td><td>Nov 1977</td><td>Dec 1978</td><td>Mar 1980</td><td>Aug 1981</td><td>Dec 1981</td></tr>
<tr><td>Date released to the public</td><td></td><td></td><td></td><td>Dec 1976</td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Date of preceding exposure draft</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>Apr 1979</td><td></td><td>Dec 1979</td></tr>
<tr><td>Gearing ratio
Numerator</td><td></td><td></td><td></td><td>Average borrowings</td><td>Non-equity capital</td><td>Net monetary liability</td><td>Average borrowings</td><td>Average net borrowing</td><td>Average net borrowing</td><td>Net monetary liabilities</td></tr>
<tr><td>Denominator</td><td></td><td></td><td></td><td>Average total assets</td><td>Numerator plus equity capital</td><td>Numerator plus equity</td><td>Average total assets</td><td>Average net operating assets</td><td>Average net operating assets</td><td>Numerator plus aggregate common stockholders equity</td></tr>
<tr><td>Applied to</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Revaluations</td><td></td><td></td><td></td><td rowspan="6">Change in capital maintenance reserve</td><td></td><td></td><td rowspan="6">Change in capital maintenance reserve</td><td></td><td rowspan="6">Change in current-cost reserve</td><td></td></tr>
<tr><td>Backlog depreciation</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Monetary assets adjustment (without deducting liabilities)</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>Monetary working capital adjustment</td><td></td><td></td><td></td><td></td><td></td><td rowspan="3">Total charges or credits to allow for impact of price changes on net operating assets</td><td></td></tr>
<tr><td>Depreciation, depletion, or amortization of PPE adjustment</td><td></td><td></td><td></td><td rowspan="2">Amount necessary to maintain beginning ratio</td><td rowspan="2">Cost of sales and depr adj</td><td rowspan="2">Current cost adjustments made to income</td></tr>
<tr><td>Cost of sales adjustment</td><td></td><td></td><td></td></tr>
</table>

* The Hyde Guidelines provided that when monetary assets exceed monetary liabilities, no gearing adjustment is to be made. Instead, the net monetary items were to be multiplied by the change in the Retail Price Index.
** No gearing adjustment arises where a company is wholly financed by shareholders' capital.

GENERAL OBSERVATIONS FROM EXHIBIT 2

A cursory review of exhibit 2 indicates a few interesting commonalities and trends. Every standard includes a cost of sales and a depreciation adjustment, against which the gearing ratio can be applied. All recent standards include a monetary working capital adjustment, and the trend is to use net working capital instead of monetary assets only. This could presage a trend toward balance sheets that show net working

capital as an asset rather than current assets on the asset side and current liabilities on the liability side. Other trends should suggest themselves as a few highlights of each standard are reviewed in the next section of this paper.

Highlights by Country

United Kingdom. The Hyde Interim Recommendations, mentioned earlier, were voluntary, called only for an abbreviated income statement, and were not as widely followed as proponents of current cost had hoped. The IASG continued to work, however, and issued a new exposure draft (ED 24) in April 1979. No fundamental changes to the gearing adjustment portion of the exposure draft were made in the final standard (SSAP 16) issued March 1980. SSAP 16 is mandatory for all listed companies and other companies meeting certain size criteria. It calls for both a supplementary profit and loss account and a balance sheet plus extensive notes. Two profit figures are derived: current-cost operating profit and current-cost profit attributable to shareholders. The standard acknowledges that there are a number of possible methods for calculating a gearing adjustment and invites users to show additional kinds of computations in a note.[14]

New Zealand. Acute action to implement fully the Richardson Report as soon as possible was abruptly slowed by the rejection of the ED 18 approach to implemention of the Sandilands Report by the Institute of Chartered Accountants in England and Wales in July 1977. Interim guidelines calling for supplemental statements, both an abbreviated balance sheet on the current-cost basis and an income statement, were issued in December 1978 (GU-1). In respect to the gearing adjustment, the following statement was made:

> It is recognized that there are differing views on how monetary items should be dealt with. Until such differences are resolved by experiment, companies should use the recommendation of the Richardson Report to calculate the gearing adjustments.[15]

Compliance with GU-1 was low. One study found that only 10 of 181 reports with 1980 fiscal year endings actually published current-cost statements.[16]

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[14] Pars. 20 and 35 of SSAP 16.

[15] Par. 34 of GU-1.

[16] Phillip Joe and Ashley W. Burrowes, "Current Cost Accounting in New Zealand: A Study of Reporting Practices" (Paper prepared for presentation at Southwest Regional Meeting, American Accounting Association, March 1982), p. 6.

An exposure draft of a full-fledged standard (ED 25) was released in August 1981 and was adopted with no change in the gearing adjustment in March 1982. As indicated in the introductory paragraph of this paper, this proposed standard closely follows the U.K. SSAP 16, the major difference being an application of the gearing adjustment. As can be seen in the bottom portion of exhibit 2, the ratio is to be applied to the "net total of the entries made to the current cost reserve." In SSAP 16, by contrast, the ratio is applied to the adjustments reflected in the current-cost income statement.

Australia. Although the Mathews Report in Australia was released before Sandilands, a full-fledged standard has not been issued but may be in 1982.[17] This does not mean that there has not been considerable activity, however. Recognizing that the greatest amount of work by companies would involve inventories and property, plant and equipment, a provisional standard dealing with these items was issued in 1976 while the treatment of monetary items was still under study. The original provisional statement was amended in 1978, a draft on monetary items was exposed in 1978, and a revision exposed in 1979.[18]

Canada. Canada is torn between a need to parallel U.S. practice and ties to the United Kingdom. Several regional and subgroups have issued reports, but only one of these is included in exhibit 2. The Ontario Committee on Inflation Accounting issued a report just before the ICAEW rejected ED 18's approach to implementation of the Sandilands requirements. It is noteworthy in part for its method of measuring the financing ratio and for its application in a funds-flow statement instead of the income statement. It is also noteworthy that Michael O. Alexander, presently research director for the FASB, was chairman of the committee.

As noted earlier, the Accounting Research Committee of the Canadian Institute of Chartered Accountants re-exposed its 1979 draft of a proposed standard in December. Although this draft closely parallels FAS 33 in many respects, a financing adjustment essentially similar to the U.K.'s gearing adjustment is retained.

One interesting aspect of the new draft is elimination of the first of the two profit measurements made possible by a gearing adjustment. This change was characterized by one commentator as follows:

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[17] R. H. Parker, "Company Standards and Accounting Standards in Australia," *Accountants Magazine* (Scotland) (February 1982): 65.

[18] For a penetrating analysis, see R. W. Gibson, "Accounting for Monetary Items under CCA," *Accounting and Business Research* (Fall 1981): 281-90.

The earlier exposure draft followed the UK practice of requiring disclosure of profit at two levels — the enterprise income and income attributable to shareholders. While a few academics have found this division understandable, to most Canadian businessmen it has been confusing, so that it has now been dropped and only the current cost profit attributable to shareholders has to be disclosed.[19]

ARGUMENTS ADVANCED

Simple recitation of some of the arguments advanced for and against gearing-type adjustments should effectively summarize the research discussed in this paper. These arguments tend to be practical rather than theoretical.

Proponents see the gearing adjustment as a simple, practical, and objective substitute for more complex conceptual approaches. They argue that both preparers and users understand what is being done. Results tend to be conservative, yet reasonably close to those yielded by more sophisticated approaches. Since there are many possible variations in method of computation, experimentation that could eventually lead to international harmonization is encouraged. This is particularly true when, as in U.K. SSAP 16, standards suggest footnote disclosure of the results of alternative computations.

One conceptual argument that is appearing more and more frequently is that, as the primary factor in the two-stage measurement of income (operating income of the enterprise and income attributable to owners), the gearing adjustment permits capture of the advantages of both the entity and the proprietorship approaches.

Arguments against the use of gearing adjustments tend to be the converse of the arguments advanced by proponents, or to focus on implementation problems. In regard to the claim that the adjustment is easily understood, recall the opposing belief of the Canadian committee that the two-stage measurement of income is not understandable but, instead, is of interest to only a few academicians and is confusing to businessmen.

Practical problems include such considerations as difficulty in classification of securities that have attributes of both debt and equity, difficulty in allocating the consolidated gearing "benefit" when subsidiaries have wide variation in capital structure, and distortions caused by unusual or specialized techniques. LIFO, for example, results in almost no cost of sales adjustment and, consequently, no gearing "bene-

[19] James Carty, "ARC Presses on with Inflation Accounting," *World Accounting Report* (January 1982): 13.

fit." The Canadian exposure draft handles this by requiring a special computation, but this is extra work and therefore costly. Use of extraordinarily short lives in computing historical cost depreciation causes a similar problem.

Some of the early concerns are being avoided or mitigated in the more recent standards. For example, New Zealand's Richardson Report calls for an adjustment for gross circulating monetary assets with current monetary liabilities being included in "borrowing." Under this approach, management might be tempted to increase notes payable artificially, or delay payment of accounts payable at year end in order to modify the second profit measurement. This is largely mitigated in CCA-1 by using net monetary working capital instead of gross monetary assets for the circulating capital adjustment, and excluding the liabilities which are included in monetary working capital from "borrowings."

Theoreticians are troubled by the difficulty of relating the gearing adjustment to particular capital maintenance concepts. Others worry because the amount required to replace assets is not related to how the acquisition will be financed. This argument would seem to fall somewhat short of substance under the two-stage measurement of income that is part of the original gearing adjustment concept; but it becomes significant when the first measurement is dropped, as is proposed in the latest Canadian exposure draft.

To repeat a statement made in the introduction of this paper, the future of gearing adjustments is uncertain, but they do have the attention of standards promulgators. Educators and researchers might well pay attention to evolving trends as new exposure drafts appear.

APPENDIX A. MARTIN GIBBS ORIGINAL EXAMPLE

	Historical cost statements	Gibbs illustration of alternatives: HC-CPP	CC	CC-CPP
Opening balance sheet				
Net fixed assets	$600	$1,000	$1,200	$1,440
Stocks of goods for resale	300	360	300	360
Total assets	$900	$1,360	$1,500	$1,800
Net monetary items	400	480	400	480
Shareholders' funds	$500	$ 880	$1,100	$1,320
Closing balance sheet				
Net fixed assets	$540	$ 900	$1,350	$1,350
Stocks of goods for resale	400	400	400	400
Total assets	$940	$1,300	$1,750	$1,750
Net monetary items	200	200	200	200
Shareholders' funds	$740	$1,100	$1,550	$1,550
Statement of total gains				
Operating gains				
Sales, less costs	$200	$ 220	$ 200	$ 220
Closing stocks less opening stocks	100	40	—	—
Depreciation	(60)	(100)	(150)	(150)
Net operating gain	$240	$ 160	$ 50	$ 70
Holding gains				
Fixed assets			$ 300	$ 60
Stocks			100	40
Net monetary items		60		60
Total holding gains	—	$ 60	$ 400	$ 160
Total gains	$240	$ 220	$ 450	$ 230

Source: Martin Gibbs, "Why Sandilands Is Not the Full Answer," *The Times* (London), 18 September 1975.

Assumptions used:
1. Taxation and dividends are ignored.
2. Stock of goods for resale constant.
3. No fixed assets purchased or sold.
4. General inflation = 20 percent.
5. Replacement cost of stocks rose 33 percent.
6. Replacement cost of fixed assets rose 25 percent.

APPENDIX B. GODLEY AND CRIPPS FIRST STAGE ILLUSTRATION (ENOUGH IS BORROWED AND DISTRIBUTED AS A DIVIDEND TO KEEP GEARING RATIO [LIABILITIES TO TOTAL ASSETS] CONSTANT)

	Gibbs current-cost transactions					*Godley and Cripps first stage assumed transactions*		
	Beg. balance sheet	*Operating transactions*		*Adjust to current cost*	*Ending balances*	*Trans-action*		*Ending balance*
Net fixed assets	1,200	(2)	(150)	300	1,350	(a)	150	1,500
Stock (of goods for resale)	300			100	400			400
Net monetary items	(400)	(1)	200		(200)	(a)	(150)	
						(b)	107	
						(c)	(107)	
						(d)	(157)	(507)
Shareholder funds	(1,100)				(1,100)			(1,100)
Operating income		(1)	(200)			(c)	(27)	
		(2)	150		(50)	(c)	(80)	
						(d)	157	0
Holding gains				(400)	(400)	(b)	107	(293)
	0		0	0	0		0	0

Source: Wynne Godley and Francis Cripps, "Profits, Stock Appreciation and the Sandilands Report," *The Times* (London), 1 October 1975.

Explanation of transactions:

(1) Sales, less costs.
(2) Depreciation.
(a) Investment in new fixed assets.
(b) Borrow enough to maintain gearing ratio.
(c) Credit borrowing to operate income — twenty-seven on stocks and eighty on fixed assets.
(d) Distribute remaining operating funds plus borrowing as a dividend.

APPENDIX C. GODLEY AND CRIPPS SECOND-STAGE ILLUSTRATION (INSTEAD OF BORROWING TO MAINTAIN GEARING RATIO, USE CC-CPP PLUS GEARING ADJUSTMENT)

	Gibbs beg. balance sheet under current cost	Godley and Cripps application of year's activity					Gibbs end. balance under CC-CPP (for comparison)
		Increase beg. items by general inflation (20%)	*Beg. balance sheet adj. for gen. infl.*	*Operating transactions*	*Entries to bring to current cost*	*End. balance sheet with gearing adj.*	
Net fixed assets	1,200	240	1,440	(2) (150)	(a) 60	1,350	1,350
Stock (of goods for resale)	300	60	360		(b) 40	400	400
Net monetary items	(400)	(80)	(480)	(1) 220	(c) 60	(200)	(200)
Shareholder funds	(1,100)	(220)	(1,320)			(1,320)	(1,320)
Current operations				(1) 220	(a) (16)		
				(2) 150	(b) (11)		
					(c) (60)	(157)	
Holding gains					(b) (29)		(230)
					(a) (44)	(73)	

Source: Wynne Godley and Francis Cripps, "Profits, Stock Appreciation and the Sandilands Report," *The Times* (London), 1 October 1975.
Explanation of transactions:

(1) Sales, less costs.
(2) Depreciation.
(a) Fixed assets, with 27 percent of the increase credited to operations.
(b) Stock, with 27 percent of the increase credited to operations.
(c) Net monetary items, with all of the increase credited to operations.

Financial Accounting Standards: A Multinational Synthesis and Policy Framework

FREDERICK D. S. CHOI and VINOD B. BAVISHI*

When corporate financial statements were issued and used solely within the confines of a single country, a uninational (ethnocentric) approach to the formulation of accounting standards seemed justified and desirable. In the context of expanded international trade and investment flows, however, ethnocentric approaches to accounting policy formulation are becoming less appropriate.[1]

A private-sector response to the need for an international standard-setting mechanism was the creation in 1973 of the International Accounting Standards Committee (IASC). Headquartered in London, this forty-six–nation member body has issued a steady stream of standards attempting to narrow international accounting differences. Despite an impressive publication record, IASC has not had a high degree of national support for its pronouncements.[2] A recent survey of the annual reports of 200 companies based in twenty IASC member coun-

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The study was sponsored in part by Business International Corporation which holds the copyright to the survey data included. The authors express their appreciation to Business International for allowing them to share the results of this research with their academic colleagues.

[1] Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978), p. 153.

[2] U.N. Center on Transnational Corporations, *Toward International Standardization of Corporate Accounting and Reporting* (New York: UNCTC, 1982), p. 36.

tries reveals that few disclose conformity with or identify deviations from IASC standards.[3]

Today, the IASC faces a credibility problem not unlike that which confronted the U.S. Accounting Principles Board prior to its demise. This credibility problem is attributed, in part, to an operating procedure that is inappropriate for a harmonization effort no longer in its infancy. Specifically, this paper argues that the IASC can and should assert more of a leadership role in the international standards-setting process lest the initiative fall to intergovernmental agencies which may prove less than desirable. This may be accomplished to some extent by adopting a working procedure which systematically isolates and deals with key international accounting differences rather than rationalizing commonalities in terms of a limited set of acceptable alternatives. An appropriate policy framework is derived via a content analysis of the annual reports of the world's leading industrial companies.

THE INTERNATIONAL STANDARDS DILEMMA

Analysis of financial statements within the confines of a single nation is facilitated by common language, currency, and, above all, financial reporting formats. This situation is significantly altered when financial analysis is conducted across national boundaries. When reading foreign financial statements, initial disorientation often stems from differences in language, accounting terminology, currency denomination, and format. Problems of a more serious nature relate to differences in the extent of financial disclosure and accounting measurement standards.[4] Message distortions caused by international accounting and reporting differences can, in the extreme, lead to suboptimal business and investment decisions, thereby reducing the allocational efficiency of capital markets and, ultimately, societal welfare.[5]

While international accounting uniformity is posited as a remedy to the foregoing scenario, accountants face a dilemma. If we accept the proposition that the environments in which accounting operates are not the same in different countries, it stands to reason that accounting must necessarily differ if it is to remain socially useful. Evidence in support of environmentally stimulated and justified differ-

[3] Michael Lafferty and David Cairns, *Financial Times World Survey of Annual Reports 1980* (London: *Financial Times,* 1980), p. 18.

[4] For examples, see Robert Hampton, III, "A World of Differences in Accounting and Reporting," *Management Accounting* (September 1980): 14-18.

[5] Morris Mendelson and Sydney Robbins, *Investment Analysis and Securities Markets* (New York: Basic Books, 1976), p. 89.

ences in accounting runs directly counter to efforts at worldwide harmonization of accounting.[6]

Closer investigation, however, suggests that the international accounting standards emerging at the present time are not aimed at all companies irrespective of size; rather, they are actually directed at the large multinational enterprises whose investment and financing activities and, therefore, accounting products, transcend national boundaries.[7] The size distinction promises to resolve the international standards dilemma.

EVOLUTION OF INTERNATIONAL ACCOUNTING STANDARDS

In an insightful essay, Alister Mason provides historical perspective on the international standards movement.[8] Selected excerpts from his historical account are summarized in the following paragraphs.

Perhaps the earliest proponent of international accounting standards was Jacob Kraayenhof, who, as president of the Seventh International Congress of Accountants (Amsterdam 1957), keynoted the urgency of international cooperation and standardization. Not until a decade later (1966) would his words give way to action with the formation of the Accountant's International Study Group (AISG), a three-nation undertaking whose terms of reference were

> to institute comparative studies as to accounting thought and practice in participating countries (Canada, the United Kingdom, and the United States), to make reports from time to time which, subject to the prior approval of the sponsoring Institutes, would be issued to members of those Institutes.[9]

During its eleven-year life, the AISG issued twenty studies on accounting and auditing topics. While few of these studies had an impact on standards subsequently issued in the three-member countries, they demonstrated the feasibility and benefits of international cooperation.

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[6] Werner G. Frank, "An Empirical Analysis of International Accounting Principles," *Journal of Accounting Research* (Autumn 1979): 593-605.

[7] Reference to size considerations can be found in the pronouncements/proposals of such international accounting organizations as the United Nations, U.N. GEISAR Group, *International Standards of Accounting and Reporting for Transnational Corporations* (New York: United Nations Economic and Social Council, 1977); Organization for Economic Cooperation and Development, *International Investment and Multinational Enterprises* (Paris: OECD, 1976); European Communities, "EEC Fourth Directive," in *International Statements, Guidelines on Accounting and Auditing, Omnibus Edition* (Stockholm: Swedish Institute of Authorized Public Accountants, 1981); and the IASC, *IAS 14,* "Reporting Financial Information by Segment" (March 1981), and *IAS 15,* "Information Reflecting the Effects of Changing Prices" (November 1981).

[8] Alister K. Mason, "The Evolution of International Accounting Standards," in *Multinational Accounting: A Research Framework for the Eighties,* ed. Frederick D. S. Choi (Ann Arbor, Mich.: UMI Research Press, 1981), pp. 155-70.

[9] Ibid., p. 156.

A real breakthrough was achieved in June 1973, when the IASC was formally established with joint representation from nine countries: Australia, Canada, France, Germany, Japan, Mexico, the Netherlands, the United Kingdom, Ireland, and the United States. Serving as IASC founder members, they subsequently admitted a fairly impressive list of associate members. With the withdrawal of Costa Rica in 1981, the IASC total membership currently stands at sixty professional accounting organizations from forty-six countries.[10]

In signing the IASC Agreement and Constitution, these bodies have consented to "formulate and publish in the public interest, standards to be observed in the presentation of audited financial statements, . . . promote their worldwide acceptance and observance," and to use their best endeavors to "ensure that published accounts comply with these standards or that there is disclosure of the extent to which they do not. . . ."[11]

Completed Projects

Sixteen IASC standards have been issued to date. They are shown here.

Standards		Date of issue
IAS No. 1,	"Disclosure of Accounting Policies"	January 1975
IAS No. 2,	"Valuation and Presentation of Inventories in the Context of the Historical Cost System"	October 1975
IAS No. 3,	"Consolidated Financial Statements"	June 1976
IAS No. 4,	"Depreciation Accounting"	October 1976
IAS No. 5,	"Information to Be Disclosed in Financial Statements"	October 1976
IAS No. 6,	"Accounting Responses to Changing Prices"	June 1977
IAS No. 7,	"Statement of Changes in Financial Position"	October 1977
IAS No. 8,	"Unusual and Prior Period Items and Changes in Accounting Policies"	February 1978
IAS No. 9,	"Accounting for Research and Development Activities"	July 1978
IAS No. 10,	"Contingencies and Events Occurring after the Balance Sheet Date"	October 1978
IAS No. 11,	"Accounting for Construction Contracts"	March 1979
IAS No. 12,	"Accounting for Taxes on Income"	July 1979
IAS No. 13,	"Presentation of Current Assets and Current Liabilities"	November 1979
IAS No. 14.	"Reporting Financial Information by Segment"	August 1981
IAS No. 15,	"Information Reflecting the Effects of Changing Prices"	November 1981
IAS No. 16,	"Accounting for Property, Plant, and Equipment"	March 1982

[10] International Accounting Standards Committee, *IASC News* (London: IASC, 1981), p. 4.

[11] International Accounting Standards Committee, *Preface to Statements of International Accounting Standards* (London: IASC, 1978), par. 19.

Analysis of Standards

An examination of the foregoing list of IAS standards reveals that seven are concerned exclusively with disclosure, the other nine with accounting measurements and disclosure. In terms of alternative practices permitted, only one disclosure requirement permits an alternative — the changing prices information called for by IAS No. 15 which supercedes IAS No. 6. In contrast, eight of the nine measurement standards permit alternative treatments as follows:

1. Some flexibility in applying the basic principles of (a) inventory valuation (IAS No. 2), (b) the allocation of the cost of depreciable assets over their useful lives (IAS No. 4), and (c) computing tax expense (IAS No. 12).
2. Some flexibility in determining whether two specific types of enterprise should be consolidated (IAS No. 3).
3. Alternatives in reporting prior-period adjustments and accounting policy changes (IAS No. 8).
4. Alternatives permitted in accounting for development expenses meeting certain specified criteria (IAS No. 9).
5. Accounting for long-term construction contracts under the percentage of completion or completed-contract method (IAS No. 11).
6. Accounting for property, plant, and equipment at historical cost or a revalued amount (IAS No. 16).

As can be seen, IASC measurement standards cannot be described as "definitive." Mason observes that as a practical matter, the IASC cannot take a position contrary to that of a national pronouncement in a country whose support is vital to the international acceptance of an IAS standard on that topic. To quote him directly,

> ... On a continuing basis, therefore, we may expect to see IAS's [IASC standards] which are worded sufficiently broadly to be compatible with the position taken by the FASB and the standard-setting bodies of certain other influential countries. While national standards on some topics, e.g., foreign currency translation, appear to be moving closer together, on others they regrettably seem to be diverging, e.g., accounting for income taxes.
>
> ... However, the intent has always been that, as the years go by, existing IAS's will be "tightened and strengthened." Presumably, one of the ways of strengthening them will be to reduce, wherever possible, the situations where alternatives are provided.[12]

ACCEPTANCE OF INTERNATIONAL STANDARDS

As intimated earlier, support of IASC dicta has not been uniformly high. Consider some findings.

[12] Mason, "International Accounting Standards," p. 160.

1. Thomas reports that some professional accounting bodies have formally declared that IASC standards are to be accorded the same status as domestic standards. Some have strongly urged their members to embrace them. Others, however, have taken no formal stand on the issue.[13]
2. The Canadian Institute of Chartered Accountants (CICA) *Handbook* states, "For companies that report in an international environment . . . it is desirable that they disclose conformity with or identify deviations from International Accounting Standards. . . ." A recent CICA survey of the financial reports of 325 large Canadian enterprises finds, however, that none did so.[14]
3. In conducting a computerized search (NAARS) of annual report data on the U.S. Fortune 500 for the years ended between 1978 and June 1980, Mason found no reference whatever to the IASC or its pronouncements.[15]
4. IASC standards are reportedly accorded more recognition in the United Kingdom. Still, of the fifteen property companies included in the 1979 *Survey of Published Accounts* by the Institute of Chartered Accountants in England and Wales, which did not provide for depreciation on their properties, only three disclosed noncompliance with IAS No. 4.[16]
5. In a *Financial Times* survey of the annual reports of 100 major European firms, Lafferty observes that references to IASC standards are "few and far between."[17]

What may account for this state of affairs? D. de Bruyne, president of the Royal Dutch Shell Company and managing director of the Royal Dutch/Shell Group, offers some candid reasons.

First, some highly significant standards-setting bodies such as the FASB are not members of IASC. Second, IASC finds itself having often to pick up what has become accepted practices in a number of countries, sifting the best parts of such existing practice and refining it. It sometimes has to allow alternatives of treatment and tends, in view of its small resources, to have to follow the national bodies rather than show them a lead. Its work tends not, therefore, to be of direct significance to multinationals, which are obliged to

[13] R. Douglas Thomas, "International Accounting Standards," *CA Magazine* (October 1977): 49-50.
[14] Canadian Institute of Chartered Accountants, *Financial Reporting in Canada*, 13th ed. (Toronto: CICA, 1979), p. 14.
[15] Mason, "International Accounting Standards," p. 164.
[16] Institute of Chartered Accountants in England and Wales, *Survey of Published Accountants 1979* (London: ICAEW, 1980), pp. 283-84.
[17] Michael Lafferty, David Cairns, and James Carty, *100 Major European Companies' Reports and Accounts* (London: *Financial Times*, 1979), p. 19.

follow national standards and rules as they emerge, in advance of their being taken up by IASC.[18]

TOPICAL PRIORITIES: A REASSESSMENT

Disenchantment with the IASC at a time when interest in global accounting norms is at a high gives genuine cause for concern. International political bodies, such as the United Nations and Organization for Economic Cooperation and Development, have made no secret of their interest in seeking increased comparability and harmonization of accounting measurement rules. Their original interest in accounting harmony was limited to corporate financial disclosure. However, both groups are again studying the wisdom of attempting to harmonize corporate transparency when many of the amounts disclosed are still determined by the use of different accounting principles. While governmental initiatives in the standards-setting process could be helpful, there is always the danger that the objectives of general-purpose accounting standards will receive less attention than those which reflect the views of governments and their special-purpose needs for information.

What are some possible remedies? We argue that the time has come for IASC to "shift gears" and adopt an operating mode more consistent with the current stage of development of the international standards movement.

During its formative years, an overriding concern of IASC — one common to all nascent organizations — was that of survival. In hindsight, the operating procedure adopted was consistent with this concern. The IASC has, thus far, concentrated on rationalizing accounting procedures presently used in countries around the world in terms of a limited number of acceptable alternatives.[19] With IASC now a going concern, attention should appropriately turn to breaking new ground to assure its long-run survival. Specifically, the IASC should directly address the issue of financial reporting objectives. Failing this, it should at least identify accounting subjects on which uniform accounting standards are needed most urgently.[20]

[18] D. de Bruyne, "International Harmonization of Accounting and Disclosure Standards" (address delivered at the 10th World Congress of the International Association of the Financial Executives Institute, Atlanta, Georgia, October 15, 1979) published by the Royal Dutch/Shell Group of Companies, 7 pp.

[19] International Accounting Standards Committee, *Preface to Statements,* par. 9.

[20] Authors who have recently raised this research issue include R. D. Nair and Werner G. Frank, "The Impact of Disclosure and Measurement Practices on International Accounting Classifications," *Accounting Review* (July 1980): 449; and Mason, "International Accounting Standards," p. 169.

While others have suggested ways of accomplishing the first issue,[21] little work has been devoted to the latter. The balance of this paper focuses on the identification of accounting subjects.

CORPORATE ACCOUNTING STANDARDS: A MULTINATIONAL SYNTHESIS

The quest for topical priorities prompts the following research questions, "Can one identify key differences in corporate financial accounting standards internationally? If so, what are they?"

Previous Research

A fairly extensive amount of descriptive literature concerning international accounting practices exists as a basis for identifying international accounting differences. They range from booklets describing practices in individual countries which are published by professional accounting firms, government departments of commerce, and banks, to reference books dealing with regional or international practices.[22] While these sources are useful, the current authors preferred to rely primarily on information derived directly from the financial statements of more than 1,000 leading industrial firms from twenty-four countries. Several reasons dictated this choice:

1. Accounting anthologies based on principles and practices codified by local professional accountancy bodies, international accounting organizations, or national laws generally present minimum standards. Accordingly, corporate reporting practices that exceed such minimums are not captured.
2. Many accounting surveys published by professional accounting firms are based on personal assessments by field office personnel of current accounting practices. In addition to problems relating to subjectivity and bias, such assessments usually are based on small samples.
3. With a few exceptions, existing literature is generally dated.
4. Most surveys of international accounting principles do not isolate key differences.

[21] D. de Bruyne, "Harmonization," pp. 6-7.

[22] Examples include American Institute of Certified Public Accountants, *Professional Accounting in Thirty Countries* (New York: AICPA, 1975), 792 pp.; Michael Lafferty, *Accounting in Europe* (Cambridge, England: Woodhead Faulkner, 1975), 425 pp.; OECD, *International Investment and Multinational Enterprises: Accounting Practices in OECD Member Countries* (Paris: OECD, 1980), 250 pp.; and R. D. Fitzgerald, A. D. Stickler, and T. R. Watts, *International Survey of Accounting Principles and Reporting Practices* (Ontario, Canada: Butterworths, 1979), 47 pp. and appendices.

Research Methodology

Countries selected for inclusion in this study were limited to those for which corporate annual report data could be obtained. Annual reports were solicited exclusively from large as opposed to small enterprises on the presumption that the former would more likely attract investor interest internationally and be affected by international accounting pronouncements.

To ensure that the sample included the world's largest industrial companies, firms selected from industriallly advanced countries had to have consolidated sales in excess of $500 million as of year-end 1980. Those selected from small industrialized and developing countries had to have sales in excess of $100 million. These selection criteria yielded a sample of 1,000 firms, 413 of which were U.S.-based and the remaining 587 headquartered in twenty-three other countries.

Companies whose operating results were consolidated with those of another firm were not included. Inclusion of subsidiary companies would not have provided a true picture of the practices in a particular country since subsidiaries normally mirror parent-company policies.

Other salient points relating to sample selection include the following:

1. Government-controlled industrial companies were included if separate annual reports were published by the firms.
2. Cooperatives were excluded, since investors at large would not be able to acquire an ownership interest in these firms.

A geographic profile of companies included in this study appears in exhibit 1.

Exhibit 1. Number of Companies Included in the Study by Country

Country	*Number*	*Country*	*Number*
Australia	17	South Korea	4
Austria	9	Malaysia	8
Belgium	13	Mexico	4
Brazil	11	Netherlands	21
Canada	36	Norway	9
Denmark	11	South Africa	9
Finland	18	Spain	5
France	49	Sweden	31
West Germany	66	Switzerland	18
India	14	United Kingdom	107
Ireland	5	United States	413
Italy	11	24 Total	1,000 Total
Japan	111		

The published annual reports issued by U.S. and non-U.S. companies were secured from each firm in the sample for 1980. Financial statements appearing in these reports together with explanatory notes were the sole source of data on accounting principles employed. An exhaustive content analysis was conducted for all countries except Japan, the United Kingdom, and the United States where relative sample sizes were 50, 50, and 100, respectively.

English versions of non-U.S. annual reports were requested when available. Assistance was obtained to translate the relevant accounting sections of foreign-language reports of seventy-seven companies from the following countries: Austria, seven companies; Belgium, six; Brazil, five; France, thirty; Switzerland, one; and West Germany, twenty-eight.

Differences in financial accounting principles internationally were assessed by means of an accounting principles checklist. Construction of this checklist was based on the following considerations:

1. Items chosen for inclusion were accounting principles appearing in a representative sample of U.S. and non-U.S. annual reports as well as those obtained from a survey of existing literature. An item was selected if it was deemed to have material valuation or income determination implications (see exhibit 2).

Exhibit 2. Synthesis of Accounting Differences

1. Marketable securities recorded at the lower cost or market?
2. Provision for uncollectible accounts made?
3. Inventory costed using FIFO?
4. Manufacturing overhead allocated to year-end inventory?
5. Inventory valued at the lower of cost or market?
6. Accounting for long-term investments: less than 20 percent ownership: cost method?
7. Accounting for long-term investments: 21-50 percent ownership: equity method?
8. Accounting for long-term investments: more than 50 percent ownership: full consolidation?
9. Both domestic and foreign subsidiaries consolidated?
10. Acquisitions accounted for under the pooling of interest method?
11. Intangible assets: goodwill amortized?
12. Intangible assets: other than goodwill amortized?
13. Long-term debt includes maturities longer than one year?
14. Discount/premium on long-term debt amortized?
15. Deferred taxes recorded when accounting income is not equal to taxable income?
16. Financial leases (long-term) capitalized?
17. Company pension fund contribution provided regularly?

18. Total pension fund assets and liabilities excluded from company's financial statement?
19. Research and development expensed?
20. Treasury stock deducted from owners' equity?
21. Gains or losses on treasury stock taken to owners' equity?
22. No general purpose (purely discretionary) reserves allowed?
23. Dismissal indemnities accounted for on a pay-as-you-go basis?
24. Minority interest excluded from consolidated income?
25. Minority interest excluded from consolidated owners' equity?
26. Are intercompany sales/profits eliminated upon consolidation?
27. Basic financial statements reflect a historical cost valuation (no price-level adjustment)?
28. Supplementary inflation-adjusted financial statements provided?
29. Straight-line depreciation adhered to?
30. No excess depreciation permitted?
31. Temporal method of foreign-currency translation employed?
32. Currency translation gains or losses reflected in current income?

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2. To minimize the number of cross-country comparisons (total possible combinations were 23 × 23 or 529), the reporting practices of all twenty-four countries chosen for the analysis were compared with a single benchmark. In the absence of a definitive set of international accounting standards, U.S. practices were used as a proxy norm.
3. To simplify cross-country analysis, matrix cells of the checklist contain discrete yes/no responses to signify adherence or nonadherence to a given accounting principle.

Research Findings

Several salient points follow from the multinational survey (see Appendices 1-5). One major finding is that fundamental differences in accounting standards between each of the twenty-four countries examined are not as extensive as one would expect. Major differences observed relate to consolidation practices, and accounting for goodwill, deferred taxes, long-term leases, discretionary reserves, inflation, and foreign-currency translation.

Specifically, most countries, with the exception of Finland and Italy, prepare consolidated financial statements when the parent company enjoys majority ownership or operating control of an investee. While most companies appear to employ the equity method of accounting for unconsolidated subsidiaries, German, Norwegian, Japanese, Swedish, and Swiss companies continue to adhere to the cost method. Companies domiciled in Australia, Denmark, and South Africa appear evenly divided in employing the cost and equity methods for unconsolidated subsidiaries. In preparing consolidated accounts, German companies

appear to be the only ones that omit foreign subsidiaries; neither do they amortize purchased goodwill. This is also true of U.K. and Malaysian companies. For companies in Finland, Norway, Italy, South Africa, and Switzerland, amortization of goodwill constitutes a minority practice.

Although accounting for deferred taxes was traditionally associated with companies in Canada, the United Kingdom, and the United States, it appears to be gaining general acceptance internationally. Companies not subscribing to this treatment were limited to those in Belgium, Finland, Italy, Norway, Sweden, and Switzerland. In contrast, the practice of capitalizing long-term leases is rarely practiced by companies outside Canada and the United States, and by some companies in Belgium.

The use of discretionary balance sheet reserves is generally frowned upon by security analysts and other readers of financial statements since their use can significantly distort income and other ratio comparisons between countries. Reserve movements impacting income statement items above the bottom line (that is, before deriving net income) was observed in many countries, but not in Australia, Canada, Malaysia, Mexico, South Africa, South Korea, the United Kingdom, and the United States.

While unadjusted historical cost is assumed to be the basic valuation framework of most countries, the present survey reveals that revaluation of fixed assets above cost is becoming quite common. Companies adhering to the unadjusted cost principle in their basic financial statements were those in Canada, Germany, Japan, the United States, and the Netherlands (by a majority of companies). Supplementary inflation accounting disclosures were predominant among U.K. and U.S. companies and increasingly present in Australia, Canada, the Netherlands, Finland, Norway, and Switzerland.

Finally, despite the popularity of the temporal method of foreign-currency translation in the United States (recently revised) and Canada, companies in most countries in Europe and the Far East prefer the current-rate method. The accounting treatment of translation gains and losses varied, however. As of year-end 1980, U.S., Canadian, and South Korean companies were the only ones to recognize consistently such gains and losses in current income.

SUMMARY AND POLICY IMPLICATIONS

In September 1975, the IASC published for general distribution a booklet entitled *The Work and Purpose of the International Accounting*

Standards Committee. The concluding paragraph to the booklet (par. 23) contains the following prediction:

Provided that the initial enthusiasm and thrust with which the IASC was started is continued, its impact in the years to come will be important. It will take perhaps five to ten years before its full effects are recognized but after that they will increase each year. Accounts issued in every important nation of the world will comply with the standards promulgated by the IASC or will disclose the extent to which there has been non-compliance. . . .

The time span of that forecast has almost elapsed, but the prediction has yet to materialize. A major conclusion of the current study is that the fulfillment of such a prophecy is dependent on the IASC's assuming more of a leadership role in setting world accounting standards. This, in turn, will necessitate a shift of emphasis from maintaining the status quo to identifying and ruling on accounting subjects on which standardization is most urgent.

The foregoing posture is supported by the findings of the multinational survey. Contrary to what is normally presumed, fundamental differences in national accounting principles, as gleaned from the reporting practices of the world's leading industrial companies, are not that great. Hence, attention to areas where commonalities currently abound are not likely to prove fruitful except for those countries desiring guidance in formulating their own standards. Major differences appear to revolve around such issues as consolidation, as well as accounting for goodwill, deferred taxes, long-term leases, discretionary reserves, inflation, and foreign exchange (translation) gains and losses. The IASC should concentrate its attention on these subjects.

SUGGESTIONS FOR FUTURE RESEARCH

Having identified some of the major differences in worldwide accounting principles, a natural progression in this line of inquiry would be to examine the impact of these observed measurement differences on the measurement of income and financial position. While studies of this nature have been conducted in the past, they have typically been confined to some of the major industrial countries in North America and Europe. The data set provided here increases significantly the scope of intercountry comparisons. Going a step further, studies assessing the impact of international measurement differences on accounting-based financial ratios appear extremely useful given the high level of interest in the international diversification of securities investments.

The purpose in identifying key international accounting differences was to provide international standard setters, notably the IASC, with a

focus. What would be even more useful at this stage would be to assist the IASC in prioritizing these differences. That is, which of the observed accounting measurement differences do users (investors) feel are most critical to their decisions? Which the least? Studies of this nature would aid the IASC in deciding which subject areas to attack first, which second, and so on.

The scope of the present study was limited to twenty-four countries. Since IASC's international membership now totals forty-six, there is an obvious need to extend the comparative framework to more countries. Little is known, for example, concerning accounting measurement rules in spheres of the world, such as South and Central America, Africa, and the Far and Middle East.

Just ten years ago, research in international accounting employing the method of content analysis was regarded as highly risky, especially by doctoral candidates in search of dissertation topics. One of the current authors can attest to the fact that the constraints of data availability, timeliness, and comprehensibility, owing to the language and currency problem, was very real indeed. Our experiences today contrast markedly with those of a decade ago. Such favorable experiences suggest that very exciting and feasible research opportunities await those with a scholarly interest in international financial statement analysis.

APPENDIX A. SYNTHESIS OF ACCOUNTING DIFFERENCES

Accounting Principles	U.S.	Canada	Brazil	Mexico	U.K.
1. Marketable securities recorded at the lower cost or market?	Yes	Yes	Yes(A)	Yes	Yes
2. Provision for uncollectible accounts made?	Yes	Yes	Yes	Yes	Yes
3. Inventory costed using FIFO?	Mixed	Mixed	No(F)	Mixed	Yes
4. Manufacturing overhead allocated to year-end inventory?	Yes	NF	Yes	Yes	Yes
5. Inventory valued at the lower of cost or market?	Yes	Yes	Mixed	Mixed	Yes
6. Accounting for long-term investments: less than 20% ownership: cost method	Yes	Yes	Yes	Yes	Yes
7. Accounting for long-term investments: 21-50% ownership: equity method	Yes	Yes	Yes	Yes	Yes
8. Accounting for long-term investments: more than 50% ownership: full consolidation	Yes	Yes	Yes	Yes	Yes
9. Both domestic and foreign subsidiaries consolidated?	Yes	Yes	Yes	Yes	Yes
10. Acquisitions accounted for under the pooling of interest method?	Yes	No(C)	NF	NF	No(C)
11. Intangible assets: goodwill amortized?	Yes	Yes	NF	Yes	No**
12. Intangible assets: other than goodwill amortized?	Yes	Yes	Yes	Yes	No**
13. Long-term debt includes maturities longer than one year?	Yes	Yes	Yes	Yes	Yes
14. Discount/premium on long-term debt amortized?	Yes	Yes	NF	Yes	No
15. Deferred taxes recorded when accounting income is not equal to taxable income?	Yes	Yes	Yes	Yes	Yes
16. Financial leases (long-term) capitalized?	Yes	Yes	No	Yes	No
17. Company pension fund contribution provided regularly?	Yes	Yes	Yes	Yes	Yes
18. Total pension fund assets and liabilities excluded from company's financial statement?	Yes	Yes	Yes	Yes	Yes
19. Research and development expensed?	Yes	Yes	Yes	Yes	Yes
20. Treasury stock deducted from owners' equity?	Yes	Yes	No**	NF	NF
21. Gains or losses on treasury stock taken to owners' equity?	Yes	Yes	No**	NF	NF

Accounting Principles	U.S.	Canada	Brazil	Mexico	U.K.
22. No general purpose (purely discretionary) reserves allowed?	Yes	Yes	No	Yes	Yes
23. Dismissal indemnities accounted for on a pay-as-you-go basis?	Yes	Yes	No**	Yes	Yes
24. Minority interest excluded from consolidated income?	Yes	Yes	Yes	NF	Yes
25. Minority interest excluded from consolidated owner's equity?	Yes	Yes	Yes	NF	Yes
26. Are intercompany sales/profits eliminated upon consolidation?	Yes	Yes	Yes	Yes	Yes
27. Basic financial statements reflect a historical cost valuation (no price-level adjustment)?	Yes	Yes	No	No	No
28. Supplementary inflation-adjusted financial statements provided?	Yes	No**	No	No	Yes
29. Straight-line depreciation adhered to?	Yes	Yes	Yes	Yes	Yes
30. No excess depreciation permitted?	Yes	Yes	No	No	No
31. Temporal method of foreign-currency translation employed?	Yes	Yes	N/A	Mixed	No(E)
32. Currency translation gains or losses reflected in current income?	Yes	Yes	N/A	Mixed	No

Key: Yes — Predominant practice. Yes* — Minor modifications, but still predominant practice. No** — Minority practice. No — Accounting principle in question not adhered to. NF — Not found. N/A — Not applicable. Mixed — Alternative practices followed with no majority.

Notes: A — Adjusted for monetary correction. B — Cost method is used. C — Purchase method is used. D — Long-term debt includes maturities longer than four years. E — Current rate method of foreign currency translation. F — Weighted average is used. G — Cost or equity. H — Translation gains and losses are deferred. I — Market is used. J — Owners' equity. K — Equity.

APPENDIX B. SYNTHESIS OF ACCOUNTING DIFFERENCES

Accounting Principles	U.S.	Germany	France	Belgium	Neth.
1. Marketable securities recorded at the lower cost or market?	Yes	Yes	Yes	Yes	Yes
2. Provision for uncollectible accounts made?	Yes	Yes	No	No	Yes
3. Inventory costed using FIFO?	Mixed	Yes	Mixed	Mixed	Mixed
4. Manufacturing overhead allocated to year-end inventory?	Yes	Yes	NF	Yes	Yes

Accounting Principles	U.S.	Germany	France	Belgium	Neth.
5. Inventory valued at the lower of cost or market?	Yes	Yes	Yes	Yes	Yes
6. Accounting for long-term investments: less than 20% ownership: cost method	Yes	Yes	Yes*	Yes	No(K)
7. Accounting for long-term investments: 21-50% ownership: equity method	Yes	No(B)	Yes*	No(B)	Yes
8. Accounting for long-term investments: more than 50% ownership: full consolidation	Yes	Yes	Yes*	Yes	Yes
9. Both domestic and foreign subsidiaries consolidated?	Yes	No**	Yes	Yes	Yes
10. Acquisitions accounted for under the pooling of interest method?	Yes	No(C)	No(C)	No(C)	No(C)
11. Intangible assets: goodwill amortized?	Yes	No	Yes	Yes	Mixed
12. Intangible assets: other than goodwill amortized?	Yes	Yes	Yes	Yes	Yes
13. Long-term debt includes maturities longer than one year?	Yes	No(D)	Yes	Yes	Yes
14. Discount/premium on long-term debt amortized?	Yes	No	No	No**	NF
15. Deferred taxes recorded when accounting income is not equal to taxable income?	Yes	Yes	Yes	No**	Yes
16. Financial leases (long-term) capitalized?	Yes	No	No	No**	No
17. Company pension fund contribution provided regularly?	Yes	Yes	Yes	Yes	Yes
18. Total pension fund assets and liabilities excluded from company's financial statement?	Yes	No	Yes	Yes	Yes
19. Research and development expensed?	Yes	Yes	Yes	No**	Yes
20. Treasury stock deducted from owners' equity?	Yes	No	Yes	NF	Mixed
21. Gains or losses on treasury stock taken to owners' equity?	Yes	No	Yes	NF	Mixed
22. No general purpose (purely discretionary) reserves allowed?	Yes	No	No	No	No
23. Dismissal indemnities accounted for on a pay-as-you-go basis?	Yes	Yes	Yes	NF	NF
24. Minority interest excluded from consolidated income?	Yes	No	Yes	Yes	Yes
25. Minority interest excluded from consolidated owners' equity?	Yes	No	Yes	Yes	Yes

Accounting Principles	U.S.	Germany	France	Belgium	Neth.
26. Are intercompany sales/ profits eliminated upon consolidation?	Yes	Yes	Yes	Yes	Yes
27. Basic financial statements reflect a historical cost valuation (no price-level adjustment)?	Yes	Yes	No	No	No**
28. Supplementary inflation-adjusted financial statements provided?	Yes	No	No	No	No**
29. Straight-line depreciation adhered to?	Yes	Mixed	Mixed	Mixed	Yes
30. No excess depreciation permitted?	Yes	Yes	No	No	No
31. Temporal method of foreign-currency translation employed?	Yes	No(E)	No(E)	Mixed	No(E)
32. Currency translation gains or losses reflected in current income?	Yes	Mixed	Mixed	Mixed	No(J)

Key: Yes — Predominant practice. Yes* — Minor modifications, but still predominant practice. No** — Minority practice. No — Accounting principle in question not adhered to. NF — Not found. N/A — Not applicable. Mixed — Alternative practices followed with no majority.

Notes: A — Adjusted for monetary correction. B — Cost method is used. C — Purchase method is used. D — Long-term debt includes maturities longer than four years. E — Current rate method of foreign currency translation. F — Weighted average is used. G — Cost or equity. H — Translation gains and losses are deferred. I — Market is used. J — Owners' equity. K — Equity.

APPENDIX C. SYNTHESIS OF ACCOUNTING DIFFERENCES

Accounting Principles	U.S.	Switz.	Ireland	Austria	Sweden
1. Marketable securities recorded at the lower cost or market?	Yes	Yes	Yes	Yes	Yes
2. Provision for uncollectible accounts made?	Yes	Yes	Yes	Yes	Yes
3. Inventory costed using FIFO?	Mixed	Yes	Yes	Mixed	Yes
4. Manufacturing overhead allocated to year-end inventory?	Yes	No	Yes	Yes	Yes
5. Inventory valued at the lower of cost or market?	Yes	Yes	Yes	Yes	Yes
6. Accounting for long-term investments: less than 20% ownership: cost method	Yes	Yes	Yes	Yes	Yes
7. Accounting for long-term investments: 21-50% ownership: equity method	Yes	No(B)	Yes	No(B)	No(B)
8. Accounting for long-term investments: more than 50% ownership: full consolidation	Yes	Yes	Yes	Yes	Yes
9. Both domestic and foreign subsidiaries consolidated?	Yes	Yes	Yes	Yes	Yes

Accounting Principles	U.S.	Switz.	Ireland	Austria	Sweden
10. Acquisitions accounted for under the pooling of interest method?	Yes	NF	No(C)	NF	No(C)
11. Intangible assets: goodwill amortized?	Yes	No**	No**	NF	Yes
12. Intangible assets: other than goodwill amortized?	Yes	No**	NF	NF	Yes
13. Long-term debt includes maturities longer than one year?	Yes	Yes	Yes	Yes	Yes
14. Discount/premium on long-term debt amortized?	Yes	NF	No	NF	No
15. Deferred taxes recorded when accounting income is not equal to taxable income?	Yes	No	Yes	No	No
16. Financial leases (long-term) capitalized?	Yes	No	No	No	No
17. Company pension fund contribution provided regularly?	Yes	Yes	Yes	Yes	Yes
18. Total pension fund assets and liabilities excluded from company's financial statement?	Yes	Yes	Yes	Yes	Yes
19. Research and development expensed?	Yes	Yes	Yes	Yes	Yes
20. Treasury stock deducted from owners' equity?	Yes	NF	NF	No	NF
21. Gains or losses on treasury stock taken to owners' equity?	Yes	NF	NF	No	NF
22. No general purpose (purely discretionary) reserves allowed?	Yes	No	Yes	Yes	No
23. Dismissal indemnities accounted for on a pay-as-you-go basis?	Yes	NF	Yes	Yes	Yes
24. Minority interest excluded from consolidated income?	Yes	Yes	Yes	NF	Yes
25. Minority interest excluded from consolidated owner's equity?	Yes	Yes	Yes	NF	Yes
26. Are intercompany sales/profits eliminated upon consolidation?	Yes	Yes	Yes	NF	Yes
27. Basic financial statements reflect a historical cost valuation (no price-level adjustment)?	Yes	No	No	No	No
28. Supplementary inflation-adjusted financial statements provided?	Yes	No**	Yes	No	No
29. Straight-line depreciation adhered to?	Yes	Yes	Yes	Mixed	Yes

Accounting Principles	U.S.	Switz.	Ireland	Austria	Sweden
30. No excess depreciation permitted?	Yes	No	No	Yes	No
31. Temporal method of foreign-currency translation employed?	Yes	No(E)	No(E)	NF	No
32. Currency translation gains or losses reflected in current income?	Yes	No(H)	No	NF	Mixed

Key: Yes — Predominant practice. Yes* — Minor modifications, but still predominant practice. No** — Minority practice. No — Accounting principle in question not adhered to. NF — Not found. N/A — Not applicable. Mixed — Alternative practices followed with no majority.

Notes: A — Adjusted for monetary correction. B — Cost method is used. C — Purchase method is used. D — Long-term debt includes maturities longer than four years. E — Current rate method of foreign currency translation. F — Weighted average is used. G — Cost or equity. H — Translation gains and losses are deferred. I — Market is used. J — Owners' equity. K — Equity.

APPENDIX D. SYNTHESIS OF ACCOUNTING DIFFERENCES

Accounting Principles	U.S.	Denmark	Finland	Norway	Italy
1. Marketable securities recorded at the lower cost or market?	Yes	No(I)	Yes	Yes	Yes
2. Provision for uncollectible accounts made?	Yes	Yes	Yes	Yes	Yes
3. Inventory costed using FIFO?	Mixed	Yes	Yes	Yes	Mixed
4. Manufacturing overhead allocated to year-end inventory?	Yes	Yes	Yes	Yes	Yes
5. Inventory valued at the lower of cost or market?	Yes	Yes	Yes(B)	Yes	Yes
6. Accounting for long-term investments: less than 20% ownership: cost method	Yes	NF	No**	Yes	Yes
7. Accounting for long-term investments: 21-50% ownership: equity method	Yes	NF	No**	No(B)	No(B)
8. Accounting for long-term investments: more than 50% ownership: full consolidation	Yes	Yes	No**	Yes	No**
9. Both domestic and foreign subsidiaries consolidated?	Yes	Yes	No**	Yes	No**
10. Acquisitions accounted for under the pooling of interest method?	Yes	No(C)	No(C)	No(C)	No(C)
11. Intangible assets: goodwill amortized?	Yes	Yes	No**	No**	No**
12. Intangible assets: other than goodwill amortized?	Yes	NF	Yes	NF	Yes
13. Long-term debt includes maturities longer than one year?	Yes	Yes	Yes	Yes	Yes
14. Discount/premium on long-term debt amortized?	Yes	Yes	NF	No	Yes

Accounting Principles	U.S.	Denmark	Finland	Norway	Italy
15. Deferred taxes recorded when accounting income is not equal to taxable income?	Yes	Yes	No	No	No
16. Financial leases (long-term) capitalized?	Yes	No	No	No	No
17. Company pension fund contribution provided regularly?	Yes	Yes	Yes	Yes	Yes
18. Total pension fund assets and liabilities excluded from company's financial statement?	Yes	Yes	Yes	Yes	Yes
19. Research and development expensed?	Yes	Yes	NF	Yes	No**
20. Treasury stock deducted from owners' equity?	Yes	Yes	NF	NF	Mixed
21. Gains or losses on treasury stock taken to owners' equity?	Yes	Yes	NF	NF	Mixed
22. No general purpose (purely discretionary) reserves allowed?	Yes	No	No	No	No
23. Dismissal indemnities accounted for on a pay-as-you-go basis?	Yes	Yes	Yes	Yes	Yes
24. Minority interest excluded from consolidated income?	Yes	Yes	Yes	Yes	No
25. Minority interest excluded from consolidated owner's equity?	Yes	Yes	Yes	Yes	No
26. Are intercompany sales/profits eliminated upon consolidation?	Yes	Yes	Yes	Yes	No**
27. Basic financial statements reflect a historical cost valuation (no price-level adjustment)?	Yes	No	No	No	No
28. Supplementary inflation-adjusted financial statements provided?	Yes	No	No**	No**	No
29. Straight-line depreciation adhered to?	Yes	Yes	Yes	Yes	Yes
30. No excess depreciation permitted?	Yes	No	No	No	No
31. Temporal method of foreign-currency translation employed?	Yes	No	No	No	NF
32. Currency translation gains or losses reflected in current income?	Yes	No	Mixed	Mixed	NF

Key: Yes — Predominant practice. Yes* — Minor modifications, but still predominant practice. No** — Minority practice. No — Accounting principle in question not adhered to. NF — Not found. N/A — Not applicable. Mixed — Alternative practices followed with no majority.

Notes: A — Adjusted for monetary correction. B — Cost method is used. C — Purchase method is used. D — Long-term debt includes maturities longer than four years. E — Current rate method of foreign currency translation. F — Weighted average is used. G — Cost or equity. H — Translation gains and losses are deferred. I — Market is used. J — Owners' equity. K — Equity.

APPENDIX E. SYNTHESIS OF ACCOUNTING DIFFERENCES

Accounting Principles	U.S.	India	S. Korea	S. Africa
1. Marketable securities recorded at the lower cost or market?	Yes	Yes	Yes	Yes
2. Provision for uncollectible accounts made?	Yes	No	Yes	No**
3. Inventory costed using FIFO?	Mixed	Mixed	Mixed	Mixed
4. Manufacturing overhead allocated to year-end inventory?	Yes	No	Yes	Yes
5. Inventory valued at the lower of cost or market?	Yes	Yes	Yes	Yes
6. Accounting for long-term investments: less than 20% ownership: cost method	Yes	Yes	Yes	Yes
7. Accounting for long-term investments: 21-50% ownership: equity method	Yes	No(B)	No(B)	No(G)
8. Accounting for long-term investments: more than 50% ownership: full consolidation	Yes	No(B)	No	Yes
9. Both domestic and foreign subsidiaries consolidated?	Yes	No(B)	N/A	Yes
10. Acquisitions accounted for under the pooling of interest method?	Yes	NF	No(C)	No(C)
11. Intangible assets: goodwill amortized?	Yes	NF	Yes	No**
12. Intangible assets: other than goodwill amortized?	Yes	NF	Yes	Yes
13. Long-term debt includes maturities longer than one year?	Yes	Yes	Yes	Yes
14. Discount/premium on long-term debt amortized?	Yes	Yes	Yes	Yes
15. Deferred taxes recorded when accounting income is not equal taxable income?	Yes	No	No	Yes
16. Financial leases (long-term) capitalized?	Yes	No	No	No
17. Company pension fund contribution provided regularly?	Yes	Yes	Yes	Yes
18. Total pension fund assets and liabilities excluded from company's financial statement?	Yes	Yes	Yes	Yes
19. Research and development expensed?	Yes	Yes	No	Yes
20. Treasury stock deducted from owners' equity?	Yes	NF	Yes	NF
21. Gains or losses on treasury stock taken to owners' equity?	Yes	NF	Yes	NF
22. No general purpose (purely discretionary) reserves allowed?	Yes	No	Yes	Yes
23. Dismissal indemnities accounted for on a pay-as-you-go basis?	Yes	Yes	No	Yes

Accounting Principles	U.S.	India	S. Korea	S. Africa
24. Minority interest excluded from consolidated income?	Yes	NF	NF	Yes
25. Minority interest excluded from consolidated owner's equity?	Yes	NF	NF	Yes
26. Are intercompany sales/profits eliminated upon consolidation?	Yes	NF	Yes	Yes
27. Basic financial statements reflect a historical cost valuation (no price-level adjustment)?	Yes	No	No	No
28. Supplementary inflation-adjusted financial statements provided?	Yes	No	No	No
29. Straight-line depreciation adhered to?	Yes	No	No	Yes
30. No excess depreciation permitted?	Yes	No	No	No
31. Temporal method of foreign-currency translation employed?	Yes	No	No	No
32. Currency translation gains or losses reflected in current income?	Yes	No	Yes	No

Key: Yes — Predominant practice. Yes* — Minor modifications, but still predominant practice. No** — Minority practice. No — Accounting principle in question not adhered to. NF — Not found. N/A — Not applicable. Mixed — Alternative practices followed with no majority.

Notes: A — Adjusted for monetary correction. B — Cost method is used. C — Purchase method is used. D — Long-term debt includes maturities longer than four years. E — Current rate method of foreign currency translation. F — Weighted average is used. G — Cost or equity. H — Translation gains and losses are deferred. I — Market is used. J — Owners' equity. K — Equity.

APPENDIX F. SYNTHESIS OF ACCOUNTING DIFFERENCES

Accounting Principles	U.S.	Spain	Japan	Australia	Malaysia
1. Marketable securities recorded at the lower cost or market?	Yes	Yes	Yes	Yes	Yes
2. Provision for uncollectible accounts made?	Yes	No**	Yes	Yes	Yes
3. Inventory costed using FIFO?	Mixed	Yes	Mixed	Yes	Mixed
4. Manufacturing overhead allocated to year-end inventory?	Yes	Yes	NF	Yes	No
5. Inventory valued at the lower of cost or market?	Yes	Yes	Yes	Yes	Yes
6. Accounting for long-term investments: less than 20% ownership: cost method	Yes	Cost	Yes	Yes	Yes
7. Accounting for long-term investments: 21-50% ownership: equity method	Yes	No(B)	No(B)	No(G)	Yes
8. Accounting for long-term investments: more than 50% ownership: full consolidation	Yes	Yes	Yes	Yes	Yes

Accounting Principles	U.S.	Spain	Japan	Australia	Malaysia
9. Both domestic and foreign subsidiaries consolidated?	Yes	Yes	Yes	Yes	Yes
10. Acquisitions accounted for under the pooling of interest method?	Yes	NF	NF	No(C)	No(C)
11. Intangible assets: goodwill amortized?	Yes	No	Yes	Yes	No
12. Intangible assets: other than goodwill amortized?	Yes	Yes	Yes	Yes	Yes
13. Long-term debt includes maturities longer than one year?	Yes	Yes	Yes	Yes	Yes
14. Discount/premium on long-term debt amortized?	Yes	Yes	Yes	Yes	Yes
15. Deferred taxes recorded when accounting income is not equal to taxable income?	Yes	No	Yes	Yes	Yes
16. Financial leases (long-term) capitalized?	Yes	No	No	No	No
17. Company pension fund contribution provided regularly?	Yes	Yes	Yes	Yes	Yes
18. Total pension fund assets and liabilities excluded from company's financial statement?	Yes	Yes	Yes	Yes	Yes
19. Research and development expensed?	Yes	No	Yes	Yes	No**
20. Treasury stock deducted from owners' equity?	Yes	Yes	Yes	NF	NF
21. Gains or losses on treasury stock taken to owners' equity?	Yes	Yes	No**	NF	NF
22. No general purpose (purely discretionary) reserves allowed?	Yes	No	No	Yes	No
23. Dismissal indemnities accounted for on a pay-as-you-go basis?	Yes	Yes	Yes	Yes	Yes
24. Minority interest excluded from consolidated income?	Yes	NF	Yes	Yes	Yes
25. Minority interest excluded from consolidated owner's equity?	Yes	NF	Yes	Yes	Yes
26. Are intercompany sales/profits eliminated upon consolidation?	Yes	Yes	Yes	Yes	Yes
27. Basic financial statements reflect a historical cost valuation (no price-level adjustment)?	Yes	No	Yes	Yes	No

Accounting Principles	U.S.	Spain	Japan	Australia	Malaysia
28. Supplementary inflation-adjusted financial statements provided?	Yes	No	No	No**	No
29. Straight-line depreciation adhered to?	Yes	Mixed	Mixed	Yes	Yes
30. No excess depreciation permitted?	Yes	No	Yes	No	No
31. Temporal method of foreign-currency translation employed?	Yes	No	No	Mixed	N/A
32. Currency translation gains or losses reflected in current income?	Yes	No	Mixed	Mixed	N/A

Key: Yes — Predominant practice. Yes* — Minor modifications, but still predominant practice. No** — Minority practice. No — Accounting principle in question not adhered to. NF — Not found. N/A — Not applicable. Mixed — Alternative practices followed with no majority.

Notes: A — Adjusted for monetary correction. B — Cost method is used. C — Purchase method is used. D — Long-term debt includes maturities longer than four years. E — Current rate method of foreign currency translation. F — Weighted average is used. G — Cost or equity. H — Translation gains and losses are deferred. I — Market is used. J — Owners' equity. K — Equity.

The Accounting Function in Socialist Economies

MAUREEN H. BERRY*

Because the accounting function exists to serve the needs of information users, its characteristics can be expected to vary from country to country, depending on the relative congruence or divergence between the public policies, or national philosophies, which guide its methodology. Thus, certain universalities should be found where there is basic agreement concerning objectives. Other factors, however, such as environmental differences or the effects of experience, can affect both the institutional arrangements for establishing accepted norms, or accounting principles, and the degree to which accounting information is perceived as an important source of decision-making information.

A significant indicator of the influence of accounting is the status accorded the accounting profession, or, in the case of socialist countries, the rights and duties of the chief accountant in units of the socialized economy. During the past two years, reordering of some national priorities within the Comecon community has resulted in changes in the Soviet and East German regulations governing this function. This paper examines these changes and speculates as to the implications for management accounting of the proposed economic reforms in Poland. First, however, there must be an appreciation of the philosophy which shapes the design of socialist accounting-information systems, as well as an understanding of the role and objectives of accounting, and the integrated nature of the accounting function in socialist economies.

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ACCOUNTING AND SOCIALIST PHILOSOPHY

An essential feature of socialist accounting is the congruence of its structure with related elements of the Marxist-Leninist philosophy of dialectical materialism. *Dialectic* can be interpreted as a theory of the conflict of opposites. As proposed by Hegel, "all development has a dialectical character, proceeding by an alienation which is thereafter transcended."[1] Applying this notion to human life, Hegel saw man's development as a process of self-creation. This occurs as man examines the characteristics of his essence or substance by looking at it as a separated or estranged external object. As he understands how his substance is constituted, how this object expresses his own activity or self, this alienation is overcome.

Marx's criticism was, first, that Hegel's concept is abstract and deals with self-awareness rather than real, physical activity; and, second, that it does not synthesize thinking and being since the transcending of alienation will be more a matter of transcending the estranged object. For Marx, man's "primary activity is not spiritual, not cognitive, but a real material activity in which he produces real objects and puts his energies, himself in fact, into them."[2] Man and nature coexist in mutual dependence, so that the essence of human labor is to adapt man's needs to nature's, while struggling to bend her to his. Thus, Hegel's self-knowledge concept was modified by substituting the practice of labor as the theme. Man alienates his "being" as he puts his energies, his life, into the creation of real objects. There his life stays as a part of the object but no longer belonging to the worker. Man can overcome this alienation, not by transcending the estranged object, but through practice, by ceasing to view the results of his labor as external and alien. To bring this emancipation about, a social revolution is needed to abolish the root cause of the problem: private ownership of property, as well as any other material restrictions preventing man's return into a life where his potential can be realized.

The dialetical notion that change occurs through the struggle of opposites was extended by Marx and Engels into a materialist conception of history and nature. Essentially, the philosophy of historical materialism holds that history is guided by certain laws and, because it is deterministic, little influence on its development can be ascribed to individuals. Change is affected by synthesis, that is, a higher force which resolves the opposition of the forces of thesis and anti-thesis. As applied

[1] Gustav A. Wetter, *Dialectical Materialism* (London: Routledge and Kegan Paul, 1958), p. 26.
[2] Ibid., p. 28.

to social issues, man, it is posited, will strive to fashion a social, political, and cultural life which is congruent with the economic structure, given that economic needs provide the stimulus for their creation. Thus, the class struggle between those who own the means of production and those who do not provides the historical dynamic for progress.

Through his interpretation of the dialectics of nature, Engels developed laws of material dialectics which form the kernel of Soviet dialectical materialism, as further elaborated by Plekhanov, Lenin, and Stalin. Since socialist philosophy sees growth, change, and development as occurring through the conflict of opposing forces, in accordance with definite laws which are accorded scientific status, Soviet research in general must fit into this model. So, in areas of investigation, such as accounting, theory must fit into a framework which is congruent with scientific laws: a viewpoint which contrasts with the perception of accounting as an art in societies elsewhere.

ACCOUNTING AND ECONOMIC POLICY

Accounting must be congruent not only with national philosophy but also with economic policy, as expressed in the national economic plans. The goals of economic growth, which identify control objectives, are defined in the eleventh five-year plan as follows:

> . . . to ensure the further growth of Soviet people's well-being on the basis of the steady, progressive development of the national economy, the acceleration of scientific and technical progress and the changeover of the economy to an intensive path of development, the more rational utilization of the country's production potential, the greatest possible economizing of all types of resources, and improvements in the quality of work.[3]

Thus, the data produced by accounting-information systems must be useful for two main purposes: to provide input for the economic planning process and to help in evaluating economic performance. Before looking at how the accounting function is organized to do this, it would be helpful to understand how financial performance and economic performance are linked to socialist thinking.

THE FINANCIAL-ECONOMIC MODEL

In a socialist economy, national income is only generated by "material" production, whereby labor is incorporated into products. Therefore, the macroaccounting system must be able to differentiate material from nonmaterial production and to identify the value added by labor. The

[3] *The Current Digest of the Soviet Press*, vol. 33, no. 8 (25 March 1981): 16 (hereafter, *Current Digest*).

difference between the value of the total social product and the value added by labor is considered to be a fund for the replacement of items consumed in the production process. These items are generally referred to as "material" costs even though they include other cost categories, such as depreciation. National income, or value added, is then distributed between the accumulation and consumption funds. In 1980, national income represented about 45 percent of the USSR's gross social product,[4] and the consumption fund's share of national income was just over 75 percent.[5]

The general structure of the distribution of the total social product is illustrated in exhibit 1. The use of the term "fund" at the macro level to connote resource earmarked for certain purposes is carried over into microaccounting systems which are organized on an integrated fund accounting basis. Under this approach, the accounting entity is the enterprise and not the individual fund. Restricted-purpose assets are segregated in the accounts, and individual assets or groups of assets are matched with related equity (passive) accounts on the balance sheet.

The linking of accounting and control in conjoint relationship was an essential feature of Lenin's proposals for establishing a socialist state under the then-prevaling conditions of economic chaos. For example, in his program for total economic control, nationalization of the basic economic regulatory mechanism, the banking system, took first priority.[6] To bring all monetary operations under social ownership, and thereby obtain the initial funding for state activities, needed no special machinery, as he saw it, nor were particular technical difficulties anticipated. "All that is required," he wrote, "is to unify accountancy."[7] In that event, the development of such a standardized tool for implementing state control took some considerable period of time, over forty years in fact, because of the unique nature and dimensions of the task.

It was not until 1925 that the Supreme Council of the National Economy established a plan of accounts, and this plan went through several modifications over the next seven years. During the 1930s, various charts of accounts were introduced into different branches of industry, but the pluralistic trend was reversed in 1940 when the Com-

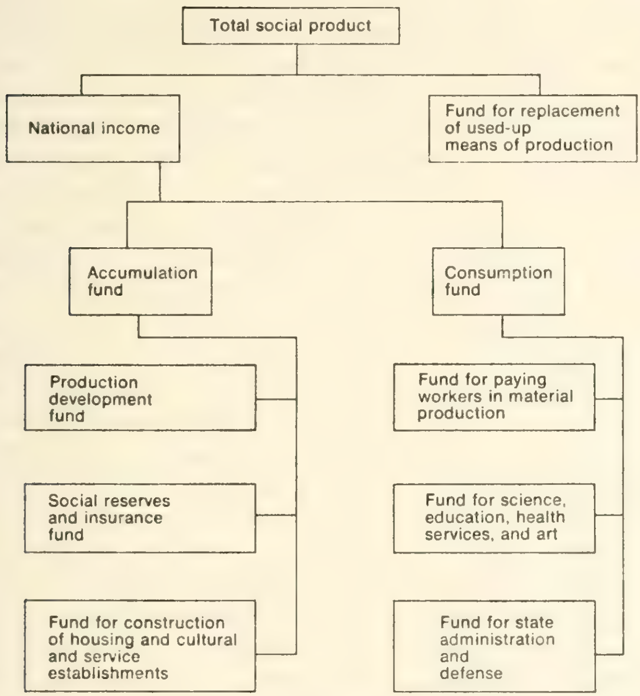
[4] Ibid., p. 14.

[5] *Current Digest,* vol. 33, no. 46 (16 December 1981): 8.

[6] V. I. Lenin, *Collected Works,* vol. 25, June-September 1917 (Moscow: Progress Publishers, 1964), p. 329.

[7] Ibid., p. 331.

Exhibit 1. General Structure of the Distribution of the Total Social Product in the Soviet Union



Source: D. A. Allakhverdyan, "National Income and Income Distribution in the USSR," in *The Soviet Planned Economy,* V. I. Mayevsky et al. (Moscow: Progress Publishers, 1974), p. 91 (adapted).

missariat for Finance introduced a uniform industrial chart of accounts which was made mandatory in 1947. A comprehensive system was finally created in 1960, when a uniform chart of accounts was introduced for all branches of the economy. Except for a few modifications, made in 1969 after the economic reforms, it is still in effect.[8]

New members of the post-war socialist community looked to the Soviet Union for ideological and methodological guidance in the early stages of designing accounting information systems for social ownership. In Poland, for example, efforts to standardize accounting began early when, in April 1945, the Ministry of Industry's Department of Finance convened a commission to design a chart of accounts for

[8] *Soviet Accounting Bulletin,* vol. 1, no. 4 (Winter 1973): 131.

industrial and trade enterprises. The work, which included the design of a uniform balance sheet and profit and loss account, was completed within a few months. It built on the German chart of accounts which had been used during the war in factories in German-occupied territory, thus taking advantage of an existing technology with which Polish bookkeepers from areas previously annexted to the Reich would be familiar.[9] As the infrastructure and institutional arrangements developed, following Soviet models, a complete reform of accounting was called for which would identify investment activities; segregate operating from investment funds and resources; adapt enterprise accounts to the new forms of banking arrangements and also their financial transactions with the state treasury, which is referred to as the "budget"; and group costs by line-item description. All of these features survive in the present system. The new chart of accounts was developed by the Office of Organization of Accounting (Biuro Organizacji Rachunkowosci), in agreement with the Department of Finance of the State Commission of Economic Planning, and went into effect for particular sectors of the economy as of January 1, 1950. Almost immediately, however, the newly organized Department of Accounting in the Ministry of Finance was asked to revise the charts of accounts once more, using methodology from the Soviet Union where appropriate. This work resulted in several different types of charts of accounts for state enterprises, banks, and cooperative enterprises, and included simplified versions for small-size entities. At the same time, the system of cameralistic accounting used in state administration was replaced by charts of accounts, based on double-entry accounting principles, for budget-supported entities, financial organs, and municipalities.[10] Further experimentation over the next decade produced the current three-tiered integrated system of charts of accounts which became mandatory in 1960. Under this approach, a uniform chart of accounts provides the basic structure from which individualized charts of accounts are developed for the various branches of the economy and for enterprises or other types of units within particular branches.[11]

Despite the diffusion of Soviet methodology, each socialist country has developed individualized systems of accounting and reporting. As a result, there is a considerable variety of practice. The value of

[9] Stanislaw Skrzywan, "Rachunkowosc w Polsce Ludowej," ("Accounting in the People's Poland"), in *Rachunkowosc Polska,* Witold Bien et al. (Warsaw: Panstwowe Wydawnictwo Ekonomiczne, 1967), pp. 29-30.

[10] Ibid., p. 32.

[11] Ibid., p. 34.

accounting uniformity for assessing economic transactions between members of the Council for Mutual Economic Assistance (CMEA) has been recognized by accounting academics and discussed at a number of international meetings over the past decade. Because of the importance of the balance sheet for evaluating the financial strength of an industrial enterprise, one of the recommendations made at an accounting conference in Bulgaria in 1972 was for the design of a uniform balance sheet structure for socialist countries as a first step in an accounting harmonization process.[12] That proposal only stimulated academic interest, however, because lack of accounting uniformity in the CMEA has not, as yet, presented any significant commercial problems. This is because trade between CMEA members is largely based on price-setting rather than on cost determination, and currencies are generally not convertible.

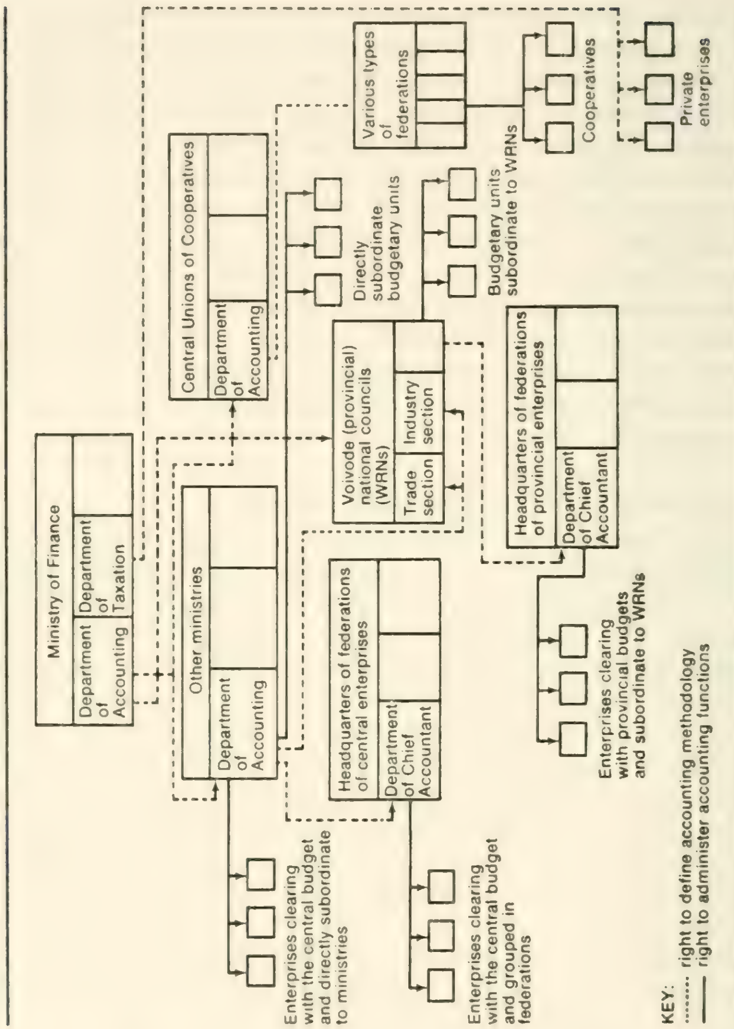
THE INTEGRATED NATURE OF THE ACCOUNTING FUNCTION

Because accounting-information systems serve both macro and micro needs, it follows that the accounting function should be integrated on a national basis in order to provide for a comprehensive and consistent structure. To illustrate this concept, the diffusion of the accounting function throughout the Polish economy is shown in exhibit 2. This illustration could be roughly construed as a general model, although certain structural alterations would be appropriate in different socialist countries. For example, private enterprises, on a very small scale, exist in Poland while private ownership may not be included in other state constitutions. Also, the central methodological unit for accounting and financial auditing is located in the State Statistics Administration in East Germany, but in the Ministry of Finance in all other Comecon member countries.

As exhibit 2 illustrates, the instructions emanating from the central methodological unit permeate all sections of the socialized economy as they flow to subordinate departments of accounting and the chief accountants who oversee the accounting function in the various enterprises, or groups of enterprises, and budgeted-supported units. These instructions, essentially, provide for uniformity in valuation and allocation methods, classifying transactions, and preparing official financial

[12] Jonas Mackevicius, "Metodologiczne Podstawy Jednolitego Modelu Bilansu Przedsiebiorstw Przemyslowych Krajow RWPG" ("Methodological Bases of a Uniform Balance Sheet Model for Industrial Enterprises in CMEA Countries"), *Zeszyty Naukowe Wydzialu Ekonomiki Produkcji Uniwersytetu Gdanskiego*, no. 10 (1978): 37.

Exhibit 2. The Scope of the Accounting Function in Poland



Source: *Mala Encyklopedia Rachunkowosci* (Warsaw: Panstwowe Wydawnictwo Ekonomiczne, (1971), p. 789.

reports. Such uniformity is necessary, not only for national economic planning purposes, but also for the various instruments of state control. These mechanisms included control exercised by the banking system, under the general heading of "control by the ruble"; supervision exercised through vertical administrative hierarchies; and management and financial audits by both state organs, such as the Ministry of Finance, and social groups, such as the Workers and Peasants Inspection in the

Soviet Union and East Germany, and the Workers' Self-government in Poland.

The standardization of accounting practice and the heavy reliance on economic models developed by economic experts have led to a divorce between economic planning and accounting control and a relative lack of opportunities for creativity in accounting work. Thus, accounting is not generally perceived as a preferred type of employment. The Planning Commission of the Russian Federation reported, for example, that only about 80 to 100 accountants with advanced technical training were annually taking work with enterprises under the jurisdiction of the Ministry of Trade, whereas from 400 to 500 were needed.[13] The problem of attracting candidates becomes, of course, more acute when demand increases, as it has done in the Soviet Union, due to changes in accounting technology.

THE CHIEF ACCOUNTANT IN THE SOVIET UNION

Problems related to the status of accounting are recognized in two decrees by the USSR Council of Ministers of 24 January 1980.[14] One of them, number 54, outlines a program of activities with the objective of "perfecting" accounting and increasing its role as a tool of effective management. It also affirms the fact that accounting's potential in the management of the national economy has not been adequately appreciated, and that there has not been enough attention paid to the professional qualifications of the accounting staff and the technical level of accounting activity.

This problem causes official concern because of interrelated large-scale plans for improving normative cost accounting as well as increasing the mechanization and automation of computational work. To help with the problem of work force supply, the Ministry of Higher and Middle Education, together with the Planning Commission, was required to increase the number of candidates to be admitted into accounting and data processing areas of study, activate finance-economics sections in the higher technical institutions, as well as courses preparing candidates for this area, and provide special schooling for diplomas. Also, the State Committee of Publishing and Poligraphy was required to distribute more textbooks in accounting and reporting in amounts

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[13] "Jest Taki Zawod — Ksiegowy" ("Being an Accountant"), *Rachunkowosc*, no. 11 (1979): 317.

[14] Zdzislaw Paryzinski, "Glowny Ksiegowy w Zwiazku Radzieckim" ("The Chief Accountant in the Soviet Union"), *Rachunkowosc* (October/November 1980): 281-83.

sufficient to satisfy the requirements of all the national economic units, as well as to make arrangements for organizing their distribution nationwide.

A review of the various functions assigned to the chief accountant reveals that, in Horngren's terms, they can generally be categorized as scorekeeping and attention directing, with considerably less emphasis on problem solving.[15]

The first priority is given to a requirement for the broad application of new mechanical and automated equipment in calculating work, as well as progressive methods of accounting. One must assume that this refers to the chief accountant's responsibility for making full use of the resources he is provided and the leeway he has, if any, in interpreting the accounting methodology.

Next he must make sure that there is full evidence of transactions involving pecuniary assets, settlements for inventories, and fixed assets. He must maintain reliable evidence of production costs and circulating assets, preparation of expenditure estimates, sales of products, the conducting of building and repair work, as well as calculating the costs of the accounting entity's own output of goods and services. Obligations to the state budget must be settled in a timely manner. Such obligaions would include social security and other insurance payments, as well as assets for financing investments, for example, the funding of depreciation which is turned over to the state. Bank credits must also be settled on time, as well as write-offs to material incentive funds, and other funds and reserves.

The chief accountant works with legal counselors to prepare material proofs of matters involving lack of monetary assets, or losses. He also supervises the preparation of reliable financial reports, based on source documents and accounting records, and conducts internal control functions and financial analysis. He supplies professional assistance in preparing production conferences for social groups conducting economic analysis and for organs of state control. Documentary review must be conducted in subordinate units, which must also be assisted in improving their control activities.

Both the executives and the chief accountant are responsible for assuring that the purchases and sales of goods and materials follow regulations; that the wages fund is accurately used; that the wages agree with scheduled rates, and that financial discipline is observed, given that it is usual to pay the payroll in cash, that proper inventories are taken of financial assets, and that assets, funds, and clearings are

[15] Charles T. Horngren, *Introduction to Management Accounting,* 5th ed. (Englewood Cliffs, N.J.: Prentice-Hall, 1981), p. 7.

properly valued; that both receivables and payables are settled in a timely fashion; and that fines and other penalties are properly assessed.

In order to assist the chief accountant by providing him with favorable conditions, the decree provides him certain rights. These include the functional subordination to him of all workers, either full-time or otherwise, engaged in recording functions, when it relates to recording data and preparing reports; permitting the chief accountant to set requirements concerning documentation of economic operations, as well as transmission of reports, or sets of reports, with such requirements being binding on all of the enterprise's organizational units. Those who violate the chief accountant's rights are subject to penalties determined on by the enterprise director. Any arrangements for the hiring, firing, and changes in the area of material responsibility must be made in agreement with the chief accountant.

Naturally, the chief accountant also has certain obligations. He is held accountable for late work and improper reporting, recording errors, failure to observe the obligatory principles of writing off losses on receivables, not performing the supervisory review of subordinate units in a timely fashion, and being personally at fault for preparing false reports.

THE CHIEF ACCOUNTANT IN EAST GERMANY

The maximum rationalization of the economy, under conditions of severe labor shortage, has led to evolutionary changes in the management and financial systems of East Germany and impacted on the role of the chief accountant. While the function of the chief accountant in socialist countries is generally synonymous with state controller, the status of the East German chief accountant was boosted by the decree of June 7, 1979, which refers to him as the director for accounting and financial control.[16]

The chief accountant's fundamental duty is to evaluate the economic management of planned decisions, as well as the systematic observance of legal requirements, while they are being conducted. The areas of recording technology and financial auditing, while of significant importance, have secondary priority. Thus, the requirement that the chief accountant examine the supporting indices for plans, as well as the analyses and other bases on which the chief executive makes decisions, brings him to a higher level of involvement in enterprise management than is presently accorded in the Soviet Union.

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[16] *Gesetzblatt der Deutschen Demokratischen Republik* (Official Gazette of the German Democratic Republic), part 1, no. 18 (6 July 1979), p. 156, par. 2.

Because of the shortage of labor, East Germany stresses the development of competition in the work place. The chief accountant is responsible for much of the related data needed by the enterprise director or the combination general director, as the case may be, concerning the degree of accomplishment of planned tasks and improvements, if any, in effectiveness.

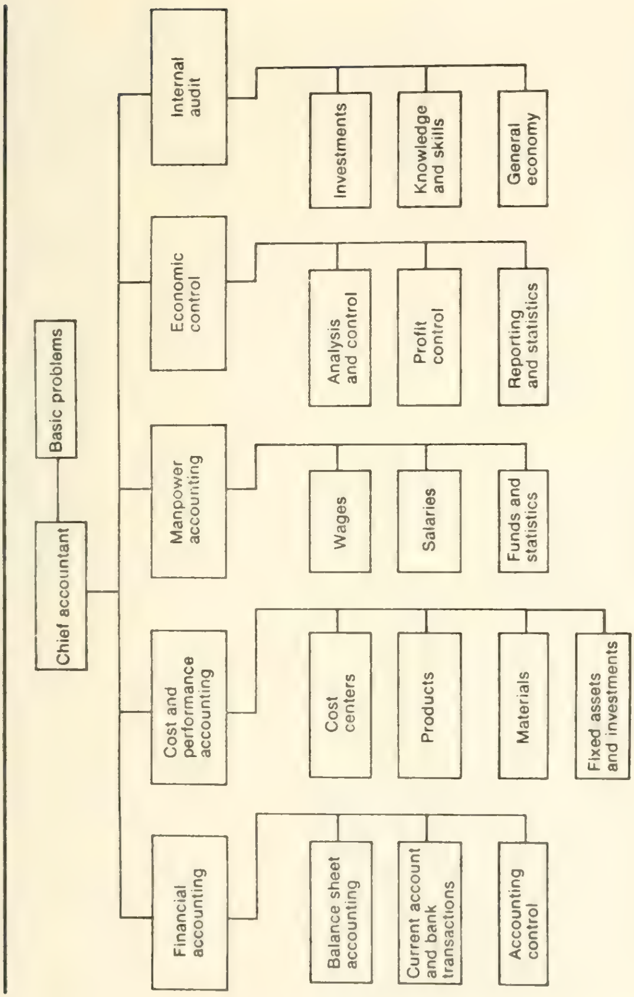
An overall view of the chief accountant's area of responsibility is provided in exhibit 3. Significant importance is attached to using all of the enterprise's assets in the effective execution of the economic plan, and this involves the chief accountant in high-level politics. Some of the details with which he would be particularly concerned include the following:[17]

1. Ensuring that assets are used to maximum effect in scientific-technical activities;
2. Investigating the use of economic materials, assuring rationality in acquiring supplies of inventories, and investigating how supplies meet standards;
3. Ensuring compliance of directed tasks with plans and checking reserves;
4. Comparing actual and budgeted use of the wages fund;
5. Examining the possibilities for lowering costs, particularly with respect to materials and energy, much of which comes from the Soviet Union;
6. Investigating the level of export activity, making sure that there is rational management of imported raw materials, and evaluating export sales profitability;
7. Assuring compliance with regulations, particularly in the creation and use of funds;
8. Ensuring that all obligations to the state budget and contracting parties are settled in a timely fashion; and
9. Examining the degree to which planned profitability is achieved, to which financial liquidity is preserved, and to which the obligations resulting from credit agreements are met.

Investments in fixed assets can prove very costly, and the chief accountant is required to follow investment plans very carefully in both the planning and the execution phases. He is also obliged to follow through and make sure that the investment assets are used in accordance with plans. The main purpose of involving the chief accountant in the

[17] Zdzislaw Paryzinski, "Glowny Ksiegowy w Niemieckiej Republice Demokratycznej" ("The Chief Accountant in the German Democratic Republic"), *Rachunkowosc*, no. 1 (1980): 15-17.

Exhibit 3. Organization Structure of the Chief Accountant's Department in an East German State Enterprise



Source: Rolf Messbauer and Armin Holicki, *Wirtschaftliche Rechningsfuehrung in der Industrie* (Berlin: Verlag Die Wirtschaft, 1979), p. 163.

planning phase is to have him evaluate the cost-benefit aspects of proposals. Consequently, he is required to stop investment proposals which are not fully supported from the standpoint of economic substantiation.

THE CHIEF ACCOUNTANT IN POLAND

In Poland, the duties of the chief accountant are currently defined by decree 226 of the Council of Ministers, dated August 26, 1973.[18] As in the case of the Soviet Union and East Germany, the Polish chief ac-

[18] *Monitor Polski* (*The Polish Monitor*), no. 1, part 8 (9 January 1974), p. 9.

countant reports directly to the unit's chief executive. Unless there are any particular rules which provide otherwise, the chief accountant is appointed and recalled by the director of the accounting entity's superior unit, based on the recommendation of the entity's director. This is the usual procedure within the socialist community. Also, the chief accountant's candidacy should be approved by the chief accountant of the superior unit.

The chief accountant's responsibilities have been comprehensively described in a recent article and are very similar to those of his Soviet colleagues.[19] However, the enterprise director may broaden the scope of the chief accountant's function if the latter has adequate technical ability. Additional assigned tasks could include management of the financial economy, performing the functions of chief economist, organizing leadership of any separate data processing center, and leadership of the enterprise's economic review unit. It is interesting to note, as an example of professional cooperation, that before East Germany passed its new regulation concerning the duties and responsibilities of chief accountants, it held consultations with the Polish authorities concerning Polish practice in the area.[20]

The proposed economic reforms of 1980/81 in Poland give rise to speculation as to whether attention will be paid in the future to the relatively neglected area of management accounting. Under the reforms, much of the middle-tier administration in Polish industry has already been dismantled in preparation for horizontal contacts between enterprises, using contracting forms of commercial relationships. Because the reforms provide that all units of the socialized economy are to be fully self-financing, it would seem that much more emphasis may be directed toward cost determination. This would also involve responsibility accounting for cost control and consideration of stronger links between economic planning and accounting control than provided for by traditional systems which functionally separate the chief economist from the chief accountant. Poland has, of course, witnessed several movements toward economic reform. In this instance, however, the growing professional emphasis among academic accountants on sophisticated cost accounting methodology may influence official perceptions of accounting's potential for increased service to society.

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[19] Alicja A. Jaruga, "The Accountancy Profession in a Centrally Planned Economy: the Polish Case," *Accountant's Magazine* (October 1979): 428-30.
[20] Paryzinski, "The Chief Accountant," p. 15.

Indexation: Brazil's Response to Inflation

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INTRODUCTION

Brazil has been troubled with inflation throughout her history. The rapid industrialization of the 1940s and 1950s, as well as the populist programs of the governments during this era, resulted in a significant acceleration in the nation's rate of inflation.[1] In the early 1970s, it appeared that Brazil had finally taken control of its inflation problem only to suffer a relapse in 1974 through the substantial increase in oil prices by the world's major oil producers. Continuing oil price increases have had a devastating effect on the rate of inflation in Brazil. At year-end 1981, the *monthly* rates of increase in general price levels hovered at 6 percent, and the accumulated rate of inflation for 1981 was over 90 percent.

With a view to eliminate, or at least reduce, the distortions caused by inflation in the financial statements of business enterprises, the Brazilian government has allowed the indexation of certain balance sheet items since 1951. This system of indexation, known as monetary correction (correção monetária), has undergone substantial changes

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[1] Werner Baer, *The Brazilian Economy: Its Growth and Development* (Columbus, Ohio: Grid Publishing), p. 165.

through the years. The most recent novations in the system were introduced through the Corporation Law of 1976 and operationalized through the Tax Law of 1977, taking effect fiscal year 1978.

The objective of this paper is to add to the body of American literature information concerning the Brazilian attempt to account for inflation. Debate has raged in the United States for some years now concerning the best method of accounting for inflation. Unfortunately, very little attention has been given to the Brazilian experiment with inflation accounting, which at present exceeds a period of some thirty years. Perhaps there is something to be learned from our South American counterparts.

Two recent articles have appeared in the South African and Scottish professional journals describing the mechanics of the new system of indexation.[2] Neither has attempted, however, to explore in depth the theoretical and practical significance of this system.

This paper will describe and analyze the significance of the newest system of monetary correction in Brazil. We shall find that under certain conditions, the Brazilian system and the traditional method of adjusting historical cost statements for changes in general price levels (GPL accounting) produce equivalent net income figures, yet the Brazilian system is simpler mechanically to operate than the procedures outlined in Accounting Principles Board (APB) Statement No. 3 and Financial Accounting Standards Board (FASB) Statement No. 33 regarding GPL accounting.

The paper will present a brief history of monetary correction, paying particular attention to the system in force immediately prior to 1978. This is important because the significance of the improvements of the new system can only be fully appreciated through an understanding of and comparison with its antecedent.

Then there will be a discussion of the new system of monetary correction including a description of the adjustment procedures required to make the transition from the old system to the new. Two very simple examples will be used in order to provide a clear explanation of the new system. By means of these examples, we shall make a comparison between this system and GPL accounting, limiting the discussion to a consideration of only those two items most affected by inflation — inventory and fixed assets. A comparison of the two systems will provide an understanding of the significance of the figures

[2] B. P. M. Fletcher, "4,003 in South Africa — In the Light of Brazilian Experience," *South African Chartered Accountant* (January 1980): 19-23; and Robert Fleming, "New Concepts in Brazilian Accounting for Inflation," *Accountant's Magazine* (April 1979): 162-65.

which result from the application of the Brazilian system of indexation.

Finally, the theoretical and practical limitations of the new system will be explored.

GENERAL COMMENTS CONCERNING THE SYSTEM OF MONETARY CORRECTION

As a preface, some general comments regarding the nature of the Brazilian system of monetary correction are in order. Monetary correction comprises a comprehensive system of indexation within the Brazilian economy. It includes index-linked financial/investment instruments in the areas of public finance, corporate investment finance, housing finance, and private savings. The system was conceived as a temporary measure, to be used only until inflation could be brought under control. Unfortunately, the system is still in existence, and has even been recently accused of being itself a contributing factor to inflation.[3]

The single set of financial statements published by Brazilian firms is that which has already passed through the monetary correction procedure. Unadjusted historical cost-based statements do not exist. This should be contrasted with the current situation in the United States, under the regime of FASB Statement No. 33, where historical cost-based financial statements constitute the primary accounting statements, and GPL data are shown as supplementary information.

Of major significance to the business enterprise in Brazil is the fact that monetary correction is fully integrated into the national tax structure. Brazilian firms are provided some tax relief by paying taxes on net income computed after indexation of items in the balance sheet. This mitigates to a degree the familiar problem of paying taxes on illusionary profits.

HISTORY

Law No. 1.474, November 26, 1951, introduced the indexation of certain financial statement items into Brazilian accounting practice. At that time, there existed a tax on excess profits (defined as the amount of profits exceeding some percentage return on owners' equity). The objective of this legislation was to provide a more realistic base, through the revaluation of owners' equity, upon which excess profits could be calculated. The revaluation of fixed assets via a set of index coefficients

[3] See Werner Baer and Paul Beckerman, "The Trouble with Index-Linking: Reflections on the Recent Brazilian Experience," *World Development* (September 1980): 677-703, for an analysis of the economic impact of the Brazilian system of indexation.

established in the law, with the counterpart going to a special reserve in owners' equity, was permitted, but not required.

Few companies availed themselves of the opportunity to restate fixed assets and owners' equity for two reasons: only original cost could be amortized for tax purposes, and a tax of 10 percent was levied on the revaluation amount. Apparently for most companies, the benefit received from an increase in the base for calculating excess profits was outweighed by the cost of paying a tax of 10 percent on the difference between book and updated values.

The Law of 1951 provided for a one-time readjustment of fixed assets. As high rates of inflation persisted, the capital base upon which return was calculated rapidly eroded. As a result, the government was obliged to allow a second one-time readjustment in 1956 through Law No. 2.862. This second readjustment quickly proved inadequate for protecting firms against the excess profits tax. Therefore, automatic regular restatement of fixed assets was instituted in 1958.

For the first time with Law No. 3.470, November 28, 1958, the wording "revaluation of fixed assets" was abandoned and the notation "monetary correction" introduced. This law allowed the monetary correction of fixed assets through the use of index coefficients fixed biannually by the National Economic Council. This meant that the monetary correction procedures could be applied only at the end of every two years. Law No. 3.470 also introduced the correction of accumulated depreciation and amortization of fixed assets parallel to the correction of the historical cost of fixed assets. The tax of 10 percent on the correction amount remained in force, but once again, the system was not required.

In 1964, through Law No. 4.357, the system of monetary correction permitted by the Law of 1958 was made mandatory. Monetary correction of fixed assets was required through the use of index coefficients fixed on an annual basis by the National Economic Council. The tax on the revaluation amount was reduced from 10 percent to 5 percent, and this tax could be avoided by purchasing treasury obligations in an amount double what the tax would have been. More importantly, amortization of the revaluation amounts was made deductible for tax purposes.

The system was altered in 1968 through Decree-law No. 401.[4] With

[4] Accounting legislation in Brazil consists of leis (laws) and decreto-leis (decree-laws). Laws are passed by Congress whereas decree-laws are decreed by the president of the republic. One of the few areas of legislation in which the president still has decree power is taxation. Thus, all decree-laws pertaining to accounting are tax laws.

a view to protect working capital from the ravages of inflation, the "Reserve for the Maintenance of Working Capital" was brought into existence. This law provided for the monetary correction of the items which constituted the "firm's working capital," a concept explicitly defined in the legislation.[5] The law was weak in that the amount of correction allowed to be sent to the reserve in any one year was limited to 20 percent of that year's net profit. Furthermore, correction was based on the firm's working capital at the beginning of the period, thereby ignoring changes in working capital during the period. Perhaps the greatest weakness resided in the provision that the firm's working capital was not to undergo monetary correction when it had a negative balance. As a result, the positive effects of inflation arising from a negative working capital position were not recorded in the financial statements.

Two of these weaknesses were corrected in 1974 through Decree-law No. 1.338. Namely, the limit on the amount that could be recorded in the reserve was raised to 100 percent of net profit, and negative working capital was required to pass through monetary correction.

With each of these subsequent laws, we can see that the government was aware of the need to improve the system of monetary correction. In 1976, the system was substantially changed such that it little resembles the original method of 1951. In order to appreciate fully the significance of this new system of monetary correction, we now turn to an analysis of the system of monetary correction in force immediately prior to 1978.

THE SYSTEM PRIOR TO 1978 (THE OLD SYSTEM)

The system of monetary correction in force prior to 1978 provided for the indexation of fixed assets and their accumulated depreciation, and the correction of the firm's working capital. (For a summary of Brazilian balance sheet presentation, see Appendix 1.) The amount of correction in fixed assets was debited to an account entitled "Monetary correction of fixed assets" which was maintained in the balance sheet as an adjunct to fixed assets. The credit was made to a "Reserve for capital increases — Fixed assets" which was maintained in the reserve section of owners' equity. The monetary correction of fixed assets affected

[5] The firm's working capital was defined as the difference between current assets plus long-term assets and current liabilities plus long-term liabilities, that is, $WC = (CA + LTA) - (CL + LTL)$. The law was later amended to include both deferred charges and deferred revenues in the computation of working capital, that is, $WC = (CA + LTA + \text{Deferred charges}) - (CL + LTL + \text{Deferred revenues})$.

income only through the increase in depreciation expense taken on the revalued fixed assets amounts. The debit arising from the correction of working capital could be recorded either as an expense in the income statement, or as a reduction from retained earnings, thereby avoiding recognition in the income statement. The credit was carried to a "Reserve for the maintenance of working capital" maintained in the owners' equity section of the balance sheet.

This system had the effect of lowering inflationary profits by the amount of increased depreciation expense and by the amount recorded in the "Reserve for the maintenance of working capital." It must be remembered that under the old system, all amounts arising from momentary correction procedures taken to income were deductible for tax purposes. The lowering of inflationary profits alleviated to a certain extent the problem of decapitaliaztion through the taxation of inflationary earnings and through the payment of dividends out of capital. This latter form of decapitalization can become a real danger in Brazil because certain companies are required by law to distribute 50 percent of unappropriated annual earnings to stockholders.[6]

The positive results which could have been gained from this system of monetary correction were limited because of several flaws in the mechanics prescribed by law.

Imperfections in the Old System

Fixed assets. The law required that monetary correction occur at the beginning of an accounting period rather than at the end, thus creating a perpetual one-year lag in the adjustment process. In other words, the rate of inflation endured in year 19X1 would not be represented in the financial statements until December 31, 19X2. Furthermore, this requirement had the effect of ignoring fixed asset purchases made during an accounting period. For monetary correction purposes, there was an implicit assumption that all fixed assets were purchased at the beginning of the following accounting period. For example, suppose a fixed asset was purchased January 5, 1974. According to the law, this asset would be assumed purchased January 1, 1975, whereupon it would acquire a price-level index of 1.00. Assuming rates of inflation at 50 percent (1974), 40 percent (1975), and 60 percent (1976), this

[6] Article 202 of Law no. 6.404 provides that stockholders have the right to receive dividends each period in an amount established in the corporate statute, or if no provision for dividends exists, one half of net profit after reduction of amounts sent to reserves. Paragraph 2 of Article 202 says that in no case can the corporate statute set dividends at less than 25 percent of adjusted net profit.

particular asset would undergo monetary correction in the following manner:

Rates of inflation	50%	40%	60%
Year	1974	1975	1976

1/5/74	1/1/75	1/1/76	12/31/76
Purchased for $1,000	Indexed at 1.00 $1,000	Indexed at 1.40 $1,400	Carried at $1,400

The asset would appear on the balance sheets as follows:
December 31, 1974, at $1,000,
December 31, 1975, at $1,000, and
December 31, 1976, at $1,400.

Under the system in effect prior to 1978, an asset purchased January 5, 1974, would not be shown in the financial statements at an adjusted amount until December 31, 1976, almost three years later. During this period of time, the asset would have held through a cumulative rate of inflation of 150 percent, but would have only been adjusted for a rate of inflation of 40 percent. The rate of inflation experienced in 1976 would eventually be accounted for in 1977, but the 50 percent rate of inflation experienced in 1974 would be lost forever. There is no apparent justification for adjusting the accounts at the beginning of the year rather than at year-end. The ability of the system to reduce effectively inflationary profits was severely hampered by time lags in the correction of fixed assets.

Working capital. The monetary correction of working capital suffered from a time-lag problem as well. The requirement that correction be done at the beginning of the year had the effect of ignoring any changes in working capital that occurred during the year.

A more serious limitation in the ability of the correction of working capital to lower inflationary profits arose from the provisions that the indexation of working capital was not mandatory, and the effect on net income could be circumvented by decreasing retained earnings, rather than flowing through income as an expense. In fact, in 1973 the Central Bank of Brazil determined that the correction of working capital *must* be classified as an appropriation of retained earnings, rather than as an expense.[7]

[7] Circular No. 179 of the Central Bank of Brazil (1973).

THE NEW SYSTEM OF MONETARY CORRECTION

Transition from "Old" to "New" System

The Corporation Law of 1976 contains a section covering the monetary correction of financial statements which substantially changed the system of correction then in existence. The Corporation Law states the general criteria of correction while the Tax Law of 1977 specifies the methodology of implementation.[8]

Besides determining the mechanics of the correction process, the Tax Law required special adjustments to be made in the transition from the old to new system. The balance sheet dated December 31, 1977, had to be adjusted for certain items with entries being made to a special monetary correction account first shown as a separate account in owners' equity, and later capitalized. In total, three types of adjustments were required. They were the following:

1. Additions to fixed assets made after December 31, 1976, were grouped into quarters and corrected up to December 31, 1977, using the average rate of inflation for the quarter. This procedure eliminated the possibility existing under the old system of having substantial time lags before the first correction.
2. The Corporation Law of 1976 introduced the use of the equity method for stock investments. Those investments to be accounted for using the equity method were required to be adjusted retroactively up to December 31, 1977, with the adjusted basis being used for monetary correction purposes.
3. The new law requires the monetary correction of the accounts in the owners' equity section of the balance sheet. For the purpose of monetary correction at December 31, 1977, these accounts had to first be adjusted by the amount accumulated in the special monetary correction account arising from points 1 and 2 just mentioned.

The effect of this special adjustment process was to bring up to date those accounts which were to undergo monetary correction for the first time, that is, investments and owners' equity. The process also had the effect of eliminating the time-lag problem on fixed assets which was inherent in the old system.

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[8] Law No. 6.404 is the most recent Brazilian law governing corporations. Article 185 is the relevant section of this law concerning the monetary correction of financial statements. Article 185 contains three paragraphs.

Articles 39-57 of Decree-law No. 1.598 constitute the relevant section of tax legislation determining the implementation of monetary correction in the financial statements.

The New System

The general criteria of the new system of monetary correction are stated in Law No. 6.404 of 1976 which requires monetary correction of the following items:

1. acquisition cost of permanent assets (investments, fixed assets, and deferred charges); the balances of accumulated depreciation, amortization, and depletion; provisions for permanent loss in value of permanent assets, and
2. the balances of owner's equity accounts.

The law further requires that correction of these items be made at year-end using an index of devaluation of the national currency recognized by the federal authorities. The correction amounts for items of owners' equity must be directly added to those accounts, with the exception of the correction of capital stock whose correction will constitute a special capital reserve. The correction amounts for permanent assets will be directly added to those accounts with no separation between historical cost and the amount of monetary correction. The counterparts of these corrections are to be accumulated in a monetary correction account whose balance shall be included in the computation of net income.

The new system is significantly different from its predecessor in the following ways. First, the monetary correction of working capital has been eliminated, and therefore its inherent problems. Second, the correction of fixed assets has been expanded to include all permanent assets. Third, the monetary correction of owners' equity accounts is introduced. Fourth, correction amounts are added directly to their respective accounts, thereby eliminating adjunct accounts for monetary correction. Fifth, correction is required at the end of a year rather than at the beginning. This represents a significant improvement, eliminating the time-lag problem examined previously.

Problems of implementation, such as which index to use and the periodicity of correction, have been addressed by the Tax Law of 1977, Decree-Law No. 1.598. As stated earlier, the Corporation Law requires monetary correction at year-end. The Tax Law allows correction on a less-than-annual basis if the company is required to prepare interim statements, as is the case of open companies which must supply semiannual reports to the stock exchange.[9]

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[9] An open company (companhia aberta) is a company which has its equity shares registered and traded on an organized stock exchange. This is in contrast to the majority of Brazilian companies which are family owned.

The Corporation Law requires the use of an officially recognized index which measures the devaluation of the cruzeiro. The index required by the tax authorities is that of the Readjustable Obligation of the National Treasury (ORTN). ORTN is an officially recognized index, being used for the adjustment of government bonds and other obligations which are subject to periodic indexation of face value. Unfortunately, as we shall see, the measurement of ORTN does not strictly follow the effective rate of inflation.

The Tax Law establishes two methods for implementation of the monetary correction system. The first requires the use of subsidiary ledgers maintained in terms of ORTN. This method is required of open companies and of others that had an opening balance in owners' equity of CR$100 million in 1977. The second method allows monetary correction by means of direct recording to the accounts.

Two examples to demonstrate the mechanics of the new system of monetary correction are now presented, concentrating on only two balance sheet items, fixed assets and inventories, as these are generally seen as the most important items requiring adjustment in any system of inflation accounting. Through a comparison with GPL accounting, we will analyze the significance of the monetary correction amount taken to net income.

Example One

We begin with a very simple example assuming a balance sheet as follows:

ABC Company
Balance Sheet
at January 1, 19X1

Cash	3,000	Note payable	1,000
Land	10,000	Capital	12,000
Total	13,000	Total	13,000

During 19X1, the company generated revenues of 8,000 and expenses of 6,000. We will assume that all revenues and expenses were realized in cash evenly throughout the year. Assuming an annual rate of inflation of 30 percent in 19X1, the monetary correction account would realize a net debit amount of 600.

Permanent assets — Land	10,000 × 30% = (3,000)
Owners' equity — Capital	12,000 × 30% = 3,600
	600

The journal entries would be

Dr. Land	3,000	
Cr. monetary correction — to Income		3,000
Dr. monetary correction — to Income	3,600	
Cr. special capital reserve		3,600

The income statement, ignoring taxes, would appear as follows:

ABC Company
Monetary Correction Income Statement
19X1

Revenues	8,000
Expenses	6,000
Operating profit	2,000
Monetary correction	(600)
Net income	1,400

The net debit balance in the monetary correction account reduces operating profit by 600, resulting in a net income of 1,400. The balance sheet at December 31, 19X1, after monetary correction, would be as shown here.

ABC Company
Monetary Correction Balance Sheet
at December 31, 19X1

Cash (3,000 + 8,000 − 6,000)	5,000
Land (10,000 + 3,000)	13,000
Total	18,000
Note payable	1,000
Capital	12,000
Special capital reserve	3,600
Retained earnings	1,400
Total	18,000

For comparison purposes, we present an APB Statement No. 3-type GPL-accounting income statement, where purchasing-power gains and losses are included in the computation of net income, rather than an FASB Statement No. 33-type income statement, where purchasing-power gains and losses are not required to be taken to net income. We adopt a somewhat unorthodox presentation which we feel more explicitly reflects the calculation of purchasing-power gains and losses. Assume an average rate of inflation during 19X1 of 20 percent.

ABC Company
GPL Income Statement
19X1

Revenues (8,000 × 1.20)	9,600
Expenses (6,000 × 1.20)	7,200
Operating profit	2,400

Purchasing-power gains and losses			
Loss — Cash	beginning balance	3,000 × 30% = (900)	
	increase in 19X1	2,000 × 20% = (400)	
Gain — Note payable		1,000 × 30% = 300	
Net purchasing-power loss			(1,000)
Net income			1,400

A comparison of GPL income with income resulting from the Brazilian system of monetary correction shows that in a very simple example, the two are equal. The monetary correction amount of 600 is equal to the purchasing-power loss on the initial net monetary asset position at January 1, 19X1, that is, cash − note payable = 3,000 − 1,000 = 2,000 × 30% = 600. The additional purchasing-power loss arising from the increase in cash during the period is exactly offset in the GPL income statement by the increase in operating profit arising from the indexation of revenues and expenses. This equality holds for GPL income only when all revenues and expenses (other than amortizations of permanent assets) are realized in monetary assets and liabilities during the period. To the extent that revenues and expenses give rise to *nonmonetary* items, the Brazilian system will produce results different from GPL accounting.

Through this first example, we see that by correcting nonmonetary items, that is, permanent assets and owners' equity, the Brazilian system effectively measures the purchasing-power loss of the initial net monetary asset position. This should not be surprising. Increasing the values of all nonmonetary items while leaving the monetary items unchanged has the effect of showing the loss in purchasing power of monetary assets and the gain in purchasing power of monetary liabilities.

Example Two

The first example did not consider two very important items possessed by business enterprises, inventories and fixed assets. We shall now develop a more complex example which includes these elements, noting the special procedures required for the correction of fixed assets and their accumulated depreciation.

Assume for this example an annual rate of inflation of 40 percent and an average rate of 20 percent. XYZ Company comparative balance sheets and income statement for 19X2 prepared under the system of monetary correction are now presented.

XYZ Company
Monetary Correction Balance Sheets

	12/31/X1	12/31/X2
Cash	500	1,000
Accounts receivable	2,000	2,500
Inventory	1,500	2,500
Fixed asset — including monetary correction	4,000	5,600
Accumulated depreciation — including monetary correction	(2,000)	(3,376)
Total	6,000	8,224
Accounts payable	700	1,100
Notes payable	500	700
Bond payable	2,300	2,300
Capital stock	2,000	2,000
Special capital reserve — monetary correction	—	800
Retained earnings — including monetary correction	500	1,324
Total	6,000	8,224

XYZ Company
Monetary Correction Income Statement
19X2

Sales		15,000
Cost of goods sold		
Inventory 1/1/X2	(1,500)	
Purchases 19X2	(13,000)	
Inventory 12/31/X2	2,500	(12,000)
Gross profit		3,000
Selling and administrative expenses	(1,000)	
Interest expense	(600)	
Depreciation expense	(480)	(2,080)
Operating profit		920
Monetary correction		(296)
Net income		624

Calculation of Specific Items

Depreciation expense. Decree-law No. 1.598 requires depreciation to be taken on the average corrected value of fixed assets, rather than either the beginning or the ending balance. Assuming an average rate of inflation of 20 percent, the average value of fixed assets would be $4{,}000 + (4{,}000 \times 20\%) = 4{,}800$. Assuming straight line depreciation of 10 percent per annum, depreciation expense for the year becomes $4{,}800 \times 10\% = \underline{\underline{480}}$.

Monetary correction.

Fixed asset	4,000 × 40%	1,600
Accumulated depreciation		
Initial balance	2,000 × 40%	(800)
19X2 depreciation expense	480 × 20%	(96)
Capital stock	2,000 × 40%	(800)
Retained earnings	500 × 40%	(200)
Reduction from operating profit		(296)

Accumulated depreciation, 12/31/X2.

Initial balance	2,000
Correction of initial balance — 40%	800
19X2 depreciation expense	480
Correction of 19X2 depreciation expense — 20%	96
Total	3,376

Retained earnings, 12/31/X2.

Initial balance	500
Correction — 40%	200
19X2 net income	624
Total	1,324

We will now present the GPL-accounting income statement, making the assumptions that revenues and expenses occur uniformly throughout the year and that ending inventory using a FIFO valuation procedure was acquired at December 31, 19X2.

XYZ Company
GPL Income Statement
19X2

Sales	(15,000 × 1.20)		18,000
Cost of goods sold			
Inventory, 1/1/X2	(1,500 × 1.40)	(2,100)	
Purchases, 19X2	(13,000 × 1.20)	(15,600)	
Inventory, 12/31/X2	(2,500 × 1.00)	2,500	(15,200)
Gross profit			2,800
Selling and administrative expenses	(1,000 × 1.20)	(1,200)	
Interest expense	(600 × 1.20)	(720)	
Depreciation expense	(480 × 1.20)	(576)	(2,496)
Operating profit			304
Purchasing-power gains and losses			
Gain on initial net liability position			400
Loss on decrease in net liability position			(80)
Net income			624

Calculation of purchasing-power gains and losses.

Gain on initial net liability position

Monetary assets, 12/31/X1	(500 + 2,000)	2,500
Monetary liabilities, 12/31/X1	(700 + 500 + 2,300)	3,500
Net monetary liabilities, 12/31/X1		1,000
Annual rate of inflation		× 40%
Gain on initial net monetary liability position		400

Loss on decrease in net monetary liability position

Monetary assets, 12/31/X2	(1,000 + 2,500)	3,500
Monetary liabilities, 12/31/X2	(1,100 + 700 + 2,300)	4,100
Net monetary liabilities, 12/31/X2		600
Net monetary liabilities, 12/31/X1		1,000
Decrease in net monetary liabilities		(400)
Average rate of inflation		× 20%
Loss on decrease in net monetary liabilities		(80)

A comparison of GPL-accounting income and income derived from the Brazilian system once again shows that the two systems provide similar results. We can see that, in effect, the amount of monetary correction reflects the general price level adjustment of the beginning balance in inventory, adjustment of all revenues and expenses (including purchases and depreciation), as well as purchasing-power gains and losses.

Whenever inventory is carried over from one year to the end of the next, GPL and Brazilian net income will differ. GPL accounting would adjust the ending inventory amount for the current year's rate of inflation without there being a concomitant offset in the purchasing-power gain/loss, because there has been no change in monetary assets from the carryover of inventory. Brazilian accounting would make no adjustment of this figure because it is not a permanent asset.

It must be noted that the equivalence of net incomes *is* dependent upon the assumption that ending inventory is acquired at December 31, 19X2. GPL-accounting net income will be different if ending inventory is acquired at a date when the price level is different from that at year-end. GPL-accounting income will remain the same only if the total number of items acquired in the last purchase are maintained in inventory until year-end. For example, if the final purchase for the year is 100 units acquired October 1 and these same 100 units comprise the total of ending inventory, then GPL-accounting net income

will be the same as if these 100 units were acquired at December 31. In this situation, the increase in gross profit due to a larger ending inventory would be exactly offset by a change in the purchasing-power gain/loss. But if any of the units should be sold prior to December 31, then GPL-accounting income will differ from what it otherwise would be.

Furthermore, equivalence of net incomes will *not* hold when the LIFO method of valuing ending inventory is employed. The only exception to this would be that improbable situation in which all past LIFO layers have been eliminated, and the only costs remaining in inventory were incurred at the current year-end.

The significance of the Brazilian system of monetary correction is that it produces results similar to traditional GPL accounting given the assumptions that ending inventory is acquired at the end of the year and valued using the FIFO cost-flow assumption. When these assumptions hold, the Brazilian system provides equivalent results through a simpler mechanical process.

This analysis has been purposely confined to a comparison between the Brazilian system of monetary correction and the traditional system of GPL accounting as outlined in APB Statement No. 3, rather than comparing with constant dollar accounting as described in FASB Statement No. 33. The major significant differences between the two American pronouncements are that FASB Statement No. 33 requires purchasing-power gains and losses to be reported as a separate line item, rather than being included in a computation of net income, and that it allows, for the most part, conversion to average-for-the-year price levels, rather than end-of-year levels. The Brazilian system and APB Statement No. 3 both require conversion to end-of-year price levels, and both include purchasing-power gains and losses, whether implicitly or explicitly, in the calculation of net income. Assuming that the restrictions on the timing of inventory acquisition and valuation method are met, income calculated under the Brazilian system through conversion to *average-for-the-year* price levels should equal FASB Statement No. 33 constant-dollar income from continuing operations, plus or minus the purchasing-power gain or loss.

Notwithstanding theoretical arguments against any system of adjusting historical costs for changes in general price levels, monetary correction suffers from several imperfections particular to that system. We turn to these next.

LIMITATIONS AND IMPERFECTIONS IN THE BRAZILIAN SYSTEM OF MONETARY CORRECTION

Loss of Information

One problem inherent in such a simplistic system is the loss of information which results from the accumulation of various effects into one monetary correction account. As we have just seen, the monetary correction amount taken to income reflects adjustments in beginning inventory and depreciation expense, and contains purchasing-power gains and losses as well. It is impossible to separate these elements under the present format in order to make a good analysis of the financial statements. Moreover, it is quite probable that the users of Brazilian financial statements do not totally understand the significance of the amount of monetary correction that appears in the income statement, for example, that it contains the gains and losses in purchasing power from holding monetary items in a period of inflation. This is, of course, an empirical question.

Items Not Corrected

Theoretically, the system is imperfect in that certain nonmonetary items, such as inventory and long-term assets, are not subject to monetary correction. These items, like permanent assets, are not subject to a loss in purchasing power and should therefore be adjusted as well. (Some theoreticians would argue, however, that inventory is so close to being transformed into a monetary asset that treating it as such is acceptable.) The law does allow for adjustment of those inventories which are destined to be incorporated into fixed assets, such as materials used in the construction of buildings to be used by the enterprise.

As we have seen, there is an implicit correction of the beginning balance of inventory. Discrepancies will arise between GPL-accounting income and Brazilian income when ending inventory using the FIFO valuation procedure is acquired prior to year-end and when the LIFO valuation procedure is employed. Obviously, the net effect of not correcting inventory will depend upon volume and rate of turnover, and the valuation method employed. The persons responsible for drafting the new law made an assumption that for the majority of enterprises, the result from not correcting inventory would be negligible.[10]

The effect of not including some nonmonetary assets in the cor-

[10] José Luiz Bulhões Pedreira and Manoel Ribeiro da Cruz Filho, *Manual da Correção Monetária das Demonstrações Financeiras: Terceira Edição* (Rio de Janeiro: Editoria Esplanada), p. 16.

rection procedure is that the reduction from net income is greater than it otherwise would be. Since, as we shall see next, the index used for monetary correction does not effectively measure the rate of inflation, this additional decrease in income helps protect the business enterprise from decapitalization.

The Correction Index

Regardless of the theoretical correctness of the new system of monetary correction to protect enterprises from the ravages of inflation, the practical effectiveness suffered a great blow when the tax authorities opted for the use of ORTN as the correction index.

A comparison of ORTN with other indices reflecting the devaluation of the cruzeiro shows that over the long run, ORTN has lagged behind by a significant amount. (See Appendix 2.) As of 1978, a comparison of the Consumer Price Index with ORTN indicates that ORTN represented only 78 percent (1,851/2,368) of the cumulative rate of inflation.

Note that until 1972, ORTN moved at a rate equivalent to the other indices. The lag only began in 1973, accelerating after 1975. The major reason for this discrepancy between ORTN and the other indices is due to an alteration in the formula for calculating ORTN. Its basis is the Wholesale Price Index, but currently only in a proportion of 80 percent, with the other 20 percent prefixed to an annual rate of inflation of 15 percent. The formula is as follows:

$$V_t = V_{t-1} \times \left[\left(0.8 \times \frac{I_{t-2} + I_{t-3} + I_{t-4}}{I_{t-3} + I_{t-4} + I_{t-5}} \right) + (0.2 \times 1.011715) \right]$$

where V = value of ORTN
I = Wholesale Price Index
t = month of reference.

The reason that ORTN reflects only a portion of the state of inflation stems from an attempt by the government to reduce the "inflation feedback" mechanism through which indexation has been accused of adding fuel to the inflationary fire. The argument proceeds along these lines.[11] A period of increasing inflation tends to cause increases in inflationary expectations and uncertainty. In such a period, the public seeks to reduce its money holdings, in the form of demand deposits, in favor of index-linked financial instruments. This flight from money

[11] For a more elaborate treatment of this phenomenon, see Paul Beckerman, "Index-Linked Financial Assets and the Brazilian Inflation Feedback Mechanism," College of Commerce and Business Administration, University of Illinois at Urbana-Champaign, October 1978.

causes a liquidity crisis in the banking system, and political pressure forces the government to help by creating additional money, and therefore inflation. By changing the calculation of ORTN, the government hoped to make index-linked instruments less attractive and thereby stem the flight out of money.

The argument concerning the inflationary pressure of index-linked financial instruments, and the fight against it, does not seem germane to the indexation of financial statements. No one has accused the indexation of accounting statements of being a cause of inflation. It is unfortunate that for financial statement purposes, the tax authorities require the use of the single index which does not effectively measure the rate of inflation. There is no apparent reason why financial statement items could not be adjusted using an officially recognized index of the devaluation of the cruzeiro other than ORTN.

To make matters worse, the government abandoned its own formula for calculating ORTN in 1979. While the rate of increase in the Wholesale Price Index in 1979 was 77 percent, the government prefixed an increase in ORTN of only 47 percent, and in 1980 with the Wholesale Price Index increasing 121 percent, ORTN was prefixed at a rate of only 51 percent. As of 1979, ORTN reflected only 65 percent (2,765/4,196) and at year-end 1980 only 47 percent (4,109/8,820) of the cumulative increase in consumer prices since 1965.

SUMMARY AND CONCLUSIONS

Brazil has experimented with a system of inflation accounting since the late 1950s. The lawmakers have made substantive changes in the system over the years to the point that the current system is closely related to the traditional U.S. system of adjusting historical cost financial statements for changes in general price levels. It has been shown that in a very simple example, and given certain restrictions, the current system of monetary correction produces results equivalent to GPL accounting. Because of this, the procedures required by FASB Statement No. 33 to reflect the effects of general inflation may be more complex than necessary. If application of the procedures outlined in Brazilian law would produce results fairly close to the results obtained from FASB Statement No. 33 concerning constant dollar accounting, then a case could be argued for employing the simpler and presumably less costly Brazilian procedures.

The extent to which the restrictive assumptions concerning inventory turnover and valuation are violated is open to empirical observation.

The prevalence of the use of LIFO is not as great a problem as is turnover, because LIFO could simply be banished from the realm of acceptable accounting procedures. Presumably under a regime of inflation accounting, the benefits derived from applying LIFO are no longer needed.

The *magnitude* of the difference in the two income numbers due to violation of the restrictive assumptions is open to analysis and/or empirical investigation as well. Even if differences are minimal, cost reductions deriving from the application of the simpler Brazilian system must be offset by costs incurred through the information loss resulting from such a simplistic approach. Information loss becomes especially important in the United States where implications from efficient market research point to an apparent need for additional information to allow off-balance sheet computations. (However, any proposals for additional information must be tempered with a consideration of materiality and cost.) A thorough investigation of the costs arising from information loss would be required to assess the net benefit of switching to such an approach as is employed in Brazil.

In no way are we suggesting here that a change should be made to the Brazilian approach of adjusting for general price-level changes. Our intent is simply to call attention to the fact that an alternative system has been in practice for several years now, and that perhaps greater attention should be given to this approach.

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APPENDIX 1. SUMMARY OF BRAZILIAN BALANCE SHEET PRESENTATION

Assets

		OLD LAW	NEW LAW	
Items subject to monetary correction	Elements of working capital	Cash Assets realizable in the short term	Current assets	
		Long-term assets	Long-term assets	
		Pending assets (Deferred charges)	———	
		Fixed assets Financial Technical	Permanent assets Investments Fixed assets Deferred charges	Items subject to monetary correction
		Compensation accounts	———	
		Equities		
	Elements of working capital	Short-term liabilities	Current liabilities	
		Long-term liabilities	Long-term liabilities	
		Pending liabilities (Deferred liabilities)	Results of future periods	
		Non-liabilities	Owners' equity	

APPENDIX 2

	Percentage Variations							
	Wholesale price index		*Consumer price index*		*Cost of living Rio de Janeiro*		*ORTN*	
Year	*Annual*	*Accum.*	*Annual*	*Accum.*	*Annual*	*Accum.*	*Annual*	*Accum.*
1966	41.5	41	38.2	38	41.1	41	39.2	39
1967	22.1	73	25.0	73	24.5	76	23.2	71
1968	24.2	115	25.5	117	24.0	118	25.0	114
1969	19.2	156	20.1	160	24.2	171	18.5	154
1970	18.5	203	19.3	211	20.9	227	19.6	204
1971	21.4	268	19.5	271	18.1	286	22.7	273
1972	15.9	326	15.7	329	14.0	340	15.3	330
1973	15.5	393	15.5	396	13.7	401	12.8	385
1974	35.4	567	34.5	567	33.8	570	33.3	546
1975	29.3	762	29.4	763	31.2	779	24.2	703
1976	44.9	1,150	46.3	1,163	44.8	1,173	37.2	1,001
1977	35.5	1,593	38.8	1,653	43.1	1,721	30.1	1,333
1978	43.0	2,321	40.8	2,368	38.1	2,415	36.2	1,851
1979	80.1	4,180	77.2	4,196	76.0	4,250	47.2	2,725
1980	121.4	9,253	110.2	8,820	86.3	7,920	50.8	4,109

Source: Eliseu Martins, *Analise de Correção Monetária das Demonstrações Financeiras* (São Paulo: Editoria Atlas, 1980), p. 42.

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[1] William A. Dymsza, <u>Multinational Business Strategy</u> (New York: McGraw-Hill, 1972), pp. 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," <u>Accountancy</u> (March 1972): 4-8.

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Contents

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Contents

The Development of International Accounting Standards: An Anthropological Perspective

WILLIAM J. VIOLET*

INTRODUCTION

In the past few decades, the international business community has become increasingly aware of the importance of accounting in reporting financial data.[1] Multinational transactions have precipitated the evolution of truly international corporations. Demands of owners, creditors, and many other users of financial reports have encouraged the development of International Accounting Standards (IAS). The official body established for promulgating IAS has been the International Accounting Standards Committee (IASC). The necessity for IAS results from the needs of users for financial data that are relevant, meaningful, understandable, comparable, verifiable, timely, neutral, and adequate for making economic decisions.[2] IAS form the "standardized" basis for comparing and contrasting financial activities of multinationals at the international level.

The preceding summary merely suggests the ambitious efforts by the IASC to instill some accounting uniformity into the reporting of the complex business transactions of multinational concerns.[3] Standards promulgated by the IASC have come under criticism, however, from some of the countries which earlier vociferously advocated their esetab-

* William J. Violet is Assistant Professor of Accounting at Moorhead State University.

[1] Norlin G. Rueschhoff, *International Accounting and Financial Reporting* (New York, London: Praeger Publishers, 1976), p. 3.

[2] American Institute of Certified Public Accountants, *Professional Standards,* vol. 3 (New York: Commerce Clearing House, 1981), pp. 7225-27.

[3] Joseph Cummings, "The International Accounting Standards Committee: Current and Future Developments," *International Journal of Accounting* (Fall 1975): 31-37.

lishment.[4] The author suggests that the success of the IASC has been limited by cultural variables and attempts to delineate several cultural determinants which influence the promulgation and acceptance of international accounting theories and standards. Hopefully, some of the cultural constraints limiting the establishment and development of both IAS and the IASC in their current context will be clarified.

In the past, several accounting authors have considered determinants of international accounting standards from political, economic, and social contexts.[5] This paper considers international accounting from a systems concept of culture in the hope that an anthropological viewpoint will stimulate further cultural research toward the establishment of a truly international accounting system and will enable accountants of various countries to visualize their particular accounting systems from the perspective of a cultural relativist.

CULTURAL DETERMINANTS

Herbert Feigl, in his introductory lecture on the philosophy of science, categorized the sciences with a simple analogy. All disciplines, hence the knowledge of man, are comparable to a glass of ice water. Philosophy is the glass, anthropology the water on which all the ice cubes of knowledge float and into which they melt. Each ice cube represents a particular science such as physics, chemistry, biology, history, and logic. From this example, anthropology is clearly an important "fluid" in the flow of knowledge between peoples.

Anthropology may be defined simply as the study of mankind and his relationships to the universe.

> Depending on the methods and goals of the anthropologists, anthropology may be a biological science, a social science — or humanity. Because man is a part of nature, anthropology is a natural science with two major subdivisions: physical anthropology (or human biology) and cultural anthropology.[6]

Anthropology studies mankind in its entirety; it is a synergistic analysis of man's being and his relationships to the external world.

Since no discipline is independent of philosophy and anthropology, the author will be concerned with the role of anthropological thought as it relates to the establishment and enforcement of international

---

[4] For a more complete discussion, see Gerhard Mueller, *International Accounting* (New York: Macmillan, 1967), pp. 1-26.

[5] For in-depth discussion, see Mueller, *International Accounting,* pp. 205-37; and Rueschhoff, *International Accounting and Financial Reporting,* pp. 108-12.

[6] E. Adamson Hoebel, *Anthropology: The Study of Man,* 4th ed. (New York: McGraw-Hill, 1972), p. 18.

accounting standards and examines accounting as a social function, that is, a product of its culture.

Sociocultural theories of anthropology attempt to explain social phenomena. Social phenomena occur between individuals and the institutions created by their society. These institutions may be intangible but are symbolized or represented by various types of tangible matter. For example, the religion of a society incorporates the philosophical beliefs and very often the legal statutes of the society. Physical representations consist of printed matter, symbols, and other tangible forms of animal and plant life.

Social phenomena are products of a given culture. Culture may still be described by the classical definition — it is learned behavior.[7] Culture and the social institutions of a culture must be learned in contrast to instinctive reactions to environmental factors. While instinctive reactions are determined through genetic codes, culture is an

> ... integrated system of learned behavior patterns that are characteristic of the members of a society and that are not the result of biological inheritance. ... Culture is therefore acquired behavior. But it is as much a part of the natural universe as the stars in the heavens, for it is a natural product of man's activities, and man is part of nature.[8]

Culture is a product of mankind, invented to cope with the natural environment as well as social phenomena. Mankind has, in turn, become a product of that culture. Culture and mankind are in a constant state of evolution, creating and refining one another.[9] Mankind's basic needs — described by Maslow as food, shelter, sex, social relationships, and self-actualization — have driven mankind to formulate a culture to satisfy them.[10] Maslow's list of needs may be expanded, however, to include needs beyond the basic ones.

Claude Levi-Strauss was an early pioneer in French structuralism which searched for basic or universal structures underlying cultural behavioral patterns.[11] The search for accounting postulates by Moonitz[12]

[7] For an in-depth introduction to culture, see Hoebel, *Anthropology,* pp. 21-54, 541-59. A more technical analysis beyond the introductory level is discussed by Bronislaw Malinowski's functional theory of culture, *A Scientific Theory of Culture and Other Essays,* 8th printing (Chapel Hill: University of North Carolina, 1977).

[8] Hoebel, *Anthropology,* p. 22.

[9] Ibid., pp. 21-53.

[10] Ernest Hilgard, Richard Atkinson, and Rita Atkinson, *Introduction to Psychology,* 6th ed. (New York: Harcourt, Brace, Jovanovich, 1975), pp. 334-35.

[11] For a further detailed discussion on French structuralism, see James A. Boon, *From Symbolism to Structuralism* (New York: Harper & Row, 1972).

[12] Maurice Moonitz, "Why Do We Need 'Postulates' and 'Principles'?" *The Journal of Accountancy* (December 1963): 42-46.

would be characteristic of employing structuralism as defined by Levi-Strauss.) Levi-Strauss employed structuralism to search for relationships between social institutions and social behavior. He expanded Maslow's classification of basic social needs to include a need for order.[13] For this, consider the importance of accounting, not accounting as currently practiced, but rudimentary accounting for order, that is, classification, control, and safeguarding of assets. In a primitive hunting society, for example, hunters will need to classify, control, and safeguard their resources to ensure their continuance and that of their society. Since their essentials may include spears, each hunter may be responsible for producing and ensuring availability of an appropriate number of weapons. The hunters are responsible for controlling and safeguarding their spears. In effect, the rudiments of accounting for resources exist in even the most basic societies. As such, the accounting for scarce resources is a function utilized by most individuals. In this instance, accounting is informal and relies on an individual's memory and oral communication. A need for order, as advocated by Levi-Strauss, fosters a need for accounting for resources.

Anthropologists have long since noticed a great diversity of cultures and cultural developments in various civilizations. A culture grows and develops in response to environmental stimuli. An imperative selection exists for each culture. Ruth Benedict explains imperative selection as follows:

> Our only scientific course is to consider our own culture, so far as we are able, as one example among innumerable others of the variant configuration of human culture.
>
> The cultural pattern of any civilization makes use of certain segments of the great arc of potential human purposes and motivations . . . any culture makes use of certain selected material techniques or cultural traits. The great arc along which all the possible human behaviors are distributed is far too immense and too full of contradictions for any culture to utilize even any considerable portion of it. Selection is the first requirement. Without selection no culture could even achieve intelligibility, and the intentions it selects and makes its own are a much more important matter than the particular detail of technology or the marriage formality that it also selects in similar fashion.[14]

Culture is selected, then, through a process of determining what needs and wants are to be satisfied and, also, what needs have priority and how mankind interacts with the environment and other people. The diversity of cultural development proceeds from a foundation of

[13] For a complete discussion of structuralism and the relationship of classification as a universality, see Claude Levi-Strauss, *Structural Anthropology* (New York: Basic Books, 1963).

[14] Ruth Benedict, *Patterns of Culture*, preface by Margaret Mead (Boston: Houghton Mifflin, 1934), p. 237.

satisfying wants and needs. To satisfy these insatiable wants, mankind and society evolve a culture which defines and establishes an economic system to allocate scarce resources efficiently for the satisfaction of human wants. Culture is the system which encompasses and determines the evolution of social institutions, social phenomena and mankind itself. In turn, these elements formulate culture. A constant evolutionary state exists. On a broader scale, it can be argued that cultures evolve from hunting to agriculture to industrialization. Cultural evolution involves the development of a culture through the acceptance of customs. Customs entail employing tangible or intangible elements by a society in a particular manner.

Various customs are employed throughout a culture. When observing and analyzing a culture, the ethnographer must be familiar with the concept of synergy as it relates to a cultural system. Each element of a culture cannot be understood by itself. Culture is more than the sum of each of the elements attributed to it. The definition of synergy is applicable: "The whole is greater than the sum of its parts." Customs and their interrelationships form a culture which is in a constant stage of evolution as external and internal influences alter its functioning. Customs are selected by a culture through reference to basic assumptions.

> The selection of the customs that go to make up a culture is never wholly random and haphazard. Selection is made with reference to a set of deep-lying assumptions, or postulates, about the nature of the external world and the nature of man himself. These assumptions as to the nature of existence are called existential postulates . . . about whether things or acts are good and to be sought after or bad and to be rejected. These are called normative postulates or values . . . .
>
> Both existential and normative postulates are the reference points which color a people's view of things, giving them their orientation toward the world around them and toward one another.[15]

Culture enables mankind to interpret the environment and explain the immediate, surrounding social phenomena. Mankind has developed and assimilated customs to cope with social phenomena.

Postulates of a culture determine a systematic choice by a society for explaining and rationalizing social phenomena. Based on these postulates, customs are created and adopted. Customs develop into or exist as social institutions. Further, social institutions envelop various customs which enable a culture to adapt to a causal environment within the parameters and constraints of the postulates it has established.

As a social institution, an accounting system must reflect the postulates of its culture. By examining and studying the normative and

[15] Hoebel, *Anthropology*, p. 26.

existential postulates of a culture, society's accounting system and its use in communicating financial data to various users may be defined and understood. It is essential to understand a given culture's postuates before an analysis or judgment concerning a particular system can be formulated. An accounting system represents its postulates and as a language reflects those postulates.

ACCOUNTING AS A LANGUAGE

Language is the most pervasive of the cultural variables. A language facilitates flexibility of thought and at the same time restricts thought development. Each language is as unique as its cultural setting which creates it. In turn, a language contributes to its culture's evolution.

Accounting, as a communication process, is a symbolic language which researchers have recently analyzed.[16]

What Is Language?

Language is the foundation for establishing culture and, like culture, it is learned behavior.[17] Languages are created, developed, and evolved within the framework of cultural postulates established by a particular society. Therefore, language reflects the postulates established by the society which employs it. Cultural postulates define the boundaries within which a language operates. Culture, through language, enables mankind to interpret the environment and explain the social phenomena occurring around it within the context of its postulates. Obviously, then, postulates directly determine language evolution. A diversity of languages represents a broad spectrum of postulates and cultures. In fact, "without language, culture . . . would be wholly impossible."[18]

As a subpart of a culture, language is influenced continually by all other elements or subparts of its culture. Language can only be understood from within the framework where it operates and is maintained. Our perceptions of reality and phenomena are established through language. The importance of language in shaping perceptions and personality was introduced in the Sapir-Whorf Hypothesis: "language

[16] Current linguistical analysis of accounting has been carried out by A. Belkaoui, "The Interprofessional Linguistic Communication of Accounting Concepts: An Experiment in Sociolinguistics," *Journal of Accounting Research* (Autumn 1980): 362-73; E. Flamholtz and E. Cook, "Cognitive Meaning and Its Role in Accounting Change: A Field Study," *Accounting Organizations and Society* (October 1978): 115-40; and R. Libby, "Bankers' and Auditors' Perceptions of the Message Communicated by the Audit Report," *Journal of Accounting Research* (Spring 1979): 99-122.

[17] Hoebel, *Anthropology*, pp. 610-11.

[18] Ibid., p. 594.

and our thought grooves are inextricably interwoven, are, in a sense, one and the same."[19] Language and accounting, as a symbolic written system, are determinants of behavior, personality, and thought process. Edward Sapir comments:

Human beings do not live in the objective world alone, nor alone in the world of social activity as ordinarily understood, but are very much at the mercy of the particular language which has become the medium of expression for their society. It is quite an illusion to imagine that one adjust to reality essentially without the use of language and that language is merely an incidental means of solving specific problems of communication or reflection. The fact of the matter is that the "real" world is to a large extent unconsciously built up on the language habits of the group. No two languages are ever sufficiently similar to be considered as representing the same social reality. The worlds in which different societies live are distinct worlds, not merely the same world with different labels attached.[20]

The impact of language on our culture and its importance in formulating perceptions and interpretations of causal events is great.

Specifically, Belkaoui in his sociolinguistic research examines accounting as a language:

Accounting can be viewed as a language, which embodies both lexical and grammatical characteristics (Belkaoui [1978]). Within the linguistic relativity school, the role of language is emphasized as a mediator and shaper of the environment; this would imply that accounting language may predispose "users" to a given mode of perception and behavior. This explanation is congruent with the "Sapir-Whorf Hypothesis" . . . .

. . . accounting may be defined as a set of lexical or symbolic representations, such as debit, credit, etc., assigned a meaning through translation rules known as accounting terminologies and used as parameters for a set of grammatical or manipulative rules known as accounting techniques.[21]

His definition classifies accounting as a language. Interacting with other cultural phenomena, accounting shapes and is shaped by its culture, postulates, and native language.

Defining and employing accounting as a language enables accountants to obtain a new perspective for understanding the role of accounting in society. Accountants refer to accounting as the language of business. It is a product and a symbolic expression of the existing culture. Though largely symbolic, accounting possesses the necessary attributes of a language. It is a language between the entities and individuals of a culture. Linguistically, accounting may appear to lack the classical oral elements of a specific language. It is a specialized symbolic

[19] Edward Sapir, *Language* (New York: Harcourt, 1921), p. 232.
[20] David G. Mandelbaum, ed., *Selected Writings of Edward Sapir* (Berkeley: University of California Press, 1949), p. 162.
[21] Belkaoui, "Linguistic Communication of Accounting Concepts," pp. 362-63.

communication. Because accounting is integrated into a cultural system, its growth and evolution within a society are strongly influenced by a particular society's language.

Earlier, cultural postulates were defined as normative and existential. Normative postulates are developed by a society to evaluate human behavior and goals, that is, values and direction. Existential postulates determine a people's view on how causal relationships are interpreted. A culture's language is created according to its cultural postulates and subsequently reflects those postulates. Further, these postulates contribute to the evolution of the language which defines them. In turn, individual behavior perceptions and responses arise from language constraints. Accounting as a symbolic language is formulated and evolved on the cultural postulates of a society. The postulates of a particular culture are the postulates of its accounting language.

Evidence demonstrating the individuality of accounting languages and their particular normative-existential postulate structures can be derived from Frederick Choi's recent cross-cultural comparison of a Japanese firm and a U.S. firm.[22] The financial statements of the Japanese firm were translated through generally accepted accounting principles to facilitate comparability of the firms. Mr. Choi's results are most interesting:

> In our preceding analysis, translating the primary financial statements of a Japanese company to secondary reports consistent with U.S. accounting norms proved potentially misleading. . . . secondary financial statements, as presently construed, fail to recognize that a foreign reader's investment risks and rewards are highly dependent on the socioeconomic environment of the reporting company's country of domicile.[23]

The individuality of the two diverse accounting languages, U.S. and Japanese, inhibits comparability. The accounting languages of the two firms are different. These languages were created within the postulate framework found in their respective countries. Comparability is inhibited because the underlying cultural postulates are different. "Something is lost in the translation," so to speak.

IAS AND CULTURAL RELATIVISM

Accounting is a social institution established by most cultures to report and explain certain social phenomena occurring in economic transactions. As a social institution, accounting has integrated certain cul-

[22] For a complete discussion of this cross-cultural comparison and its resulting implications, see Choi, "Primary-Secondary Reporting: A Cross-Cultural Analysis," *International Journal of Accounting* (Fall 1980): 83-104.
[23] Ibid., pp. 96-97.

tural customs and elements within the constraints of cultural postulates. Accounting cannot be isolated and analyzed as an independent component of a culture. It is, like mankind and other social institutions, a product of culture and contributes to the evolution of the culture which employs it. Since accounting is culturally determined, other cultural customs, beliefs, and institutions influence it.

Consider the accounting system employed in the United States. Early accounting practices and concepts were assimilated and adopted through acculturation from the British.[24] The British practices were a product of British culture. Since American culture has significantly paralleled British culture, the acculturation process was adaptive rather than revolutionary, and early British accounting practices were adapted to the American culture.

As domestic business expanded beyond the national borders, American culture was and is being presented to neighboring countries. American business transactions are, in effect, an ambassador to the American way of life. The U.S. accounting system reflects the country's culture. Being pragmatically developed and applied to various social phenomena, American accounting has been developed to cope with specific American business problems. With the rapid increase in international business operations, several accounting organizations have attempted to adapt this domestic system to the international environment. Considering cultural theory, one may question this attempt. Consider the adaption of generally accepted accounting principles to the translation of foreign currencies. Certain foreign currencies may be translated, but in reality the originating country may not even be able to substantiate the value of its currency because of internal or external circumstances.

Does the American accounting system provide a rational system of accounting for other nations? This system has been highly praised for its efficiency and reliability in portraying financial data for economic decisions. In a highly industrialized and technological society, generally accepted accounting principles may be sufficient to resolve most issues concerning the practical and the conceptual. Accounting as a cultural product has evolved in the United States to resolve certain business-related issues.The complexity of this accounting system has grown in response to the complexity of the technology, the sociopolitical system, and financial transactions.

Cultures parallel to the American industrialized techno-structure exist throughout the world in Britain, Canada, West Germany, Japan,

[24] William Kanaga, "International Accounting: The Challenge and the Changes," *Journal of Accountancy* (November 1980): 55-56.

and, to a lesser extent, several other countries. If cultural differences concerning political structures, beliefs, traditions, philosophies, and social phenomena are mentioned, however, an infinite variety of cultural variables could be illustrated. Each unique culture produces a unique accounting structure shaped by a multitude of cultural constraints and variables. Visualize an accounting structure for two socities which are both industrialized but diametrically opposed philosophically. The systems may be parallel industrially, yet conventions and cultural variables may contribute to substantial differences of accounting procedures. One nation's culture may well have been determined largely by geographical and physical barriers.

One can expect accounting principles to vary depending on cultural variances. Can an accounting system of one culture be compared or contrasted with an accounting system of another culture? Comparisons are essential for practicability and perspective, but arbitrary contrasts offer little relevance. Since accounting is the product of a culture, similarities and differences will be present between cultures. Contrasting two cultural products becomes very subjective. Ethnocentrism is highly probable. Cross-cultural comparisons suffer from variables beyond the observer's control. Cultural impressions cannot be totally alienated from an observer formulating observations and conclusions. Franz Boas was extremely critical of cross-cultural comparisons and the evolutionary theories comparing cultural similarities.[25]

Even though cross-cultural comparisons have been facilitated through the gathering of statistical data,[26] cultural comparisons must be viewed with skepticism. Many cultural variables can be compared with respect to the concept of synergy. In this regard, the theory of cultural relativism is explained by Hoebel:

> The concept of cultural relativity states that standards of rightness and wrongness (values) and of usage and effectiveness (customs) are relative to the given culture of which they are a part. In its most extreme form, it holds that every custom is valid in terms of its own cultural setting. In practical terms, it means that anthropologists learn to suspend judgment, to strive to understand what goes on from the point of view of the people being studied, that is, to achieve empathy, for the sake of humanistic perception and scientific accuracy. . . . [He] who lacks this trait — who cannot put aside all chauvinist ethnocentrism, that is, the habit of uncritically judging other peoples' be-

[25] For an in-depth discussion of Franz Boas and his interpretation of cultural relativism, see *Social Evolution* (Cleveland: Meridan, 1963).

[26] A coded data retrieval system created by George Murdock and implemented by John Whiting and Irvin Child was employed for hypothesis testing in contrast to Boasian anthropology. See John Whiting and Irvin Child, *Child Training and Personality: A Cross-Cultural Study* (New Haven: Yale University Press, 1953).

havior according to the standards set in his own culture — can never become a ... cultural anthropologist.[27]

Cultural relativity does not refute cultural comparison but qualifies the comparisons which can be made. In the areas of economics and finance, even comparisons of different industries are subject to qualifications. Often comparisons between companies of different industries are extremely limited. An individual company's financial data are relative to other companies operating in the same or in essentially a similar industrial setting. Therefore, comparisons made between two companies of different industries are often irrelevant. Adding the dimension of internationalism further complicates defining an individual company's industry.[28] Cultural variables further dissipate a definable industry.

Cultural products, like the cultures which produce them, can be compared, but only if certain assumptions and qualifications are made by the researcher. All too often, accounting systems of various countries are compared without reference to the unique cultures or cultural variables which produce them. Such cross-cultural comparisons are limited in relevance.[29] Ethnographic field work for considering an accounting system may yield a better result. In this view, the concept of cultural relativism becomes a determining variable. Judgments concerning a particular country's accounting concepts and practices should be made in light of its cultural system and environment.[30] It is because of the infinite diversity of cultural systems that a diversity of accounting methods may continue to exist in the world. A country which does not recognize a parent-subsidiary relationship cannot be expected to condone consolidation practices. At an Arthur Young Professors' Roundtable, Mr. Sy Cip introduced the concept of cultural relativism:

Accounting principles, standards, and practices are usually a direct product of the circumstances and influences of their environment and are most meaningful if viewed against such factors. Accordingly, accounting methods and applications originating in one country have probably the greatest utility in that country or in one with a similar environment. They could be quite inappropriate or may work undue hardships in countries of dissimilar environments.

In the development of international accounting standards it is therefore essential that the diverse and differing environments where such standards are intended to be applied are first understood and appreciated. Failure to con-

[27] Hoebel, *Anthropology*, pp. 27-28.

[28] See Choi, "Primary-Secondary Reporting: A Cross-Cultural Analysis."

[29] Ibid.

[30] See the American Accounting Association, *A Statement of Basic Accounting Theory* (Evanston, Ill.: AAA, 1966), for a discussion on considering environmental information as a financial data.

sider environmental differences or circumstances will likely deter the acceptance of any established international standards.[31]

The evolution of an accounting system is a complex process, and comparisons between such systems should be qualified. Comparisons between economies and technologies must also be qualified. An accounting system, in some stage of development, exists in all societies. As technology develops and complexities of economic transactions arise, an accounting system must evolve to interpret and report economic transactions to its society. Eventually, multinationals develop in some societies requiring an accounting system which reports to various cultures under the constraints of legalistic statutes and ownership. An accounting system is a culture's response for supplying owners and society with essential financial data for making economic decisions. Cultural determinants may limit the growth of this system. To critique or compare accounting systems is difficult because a particular accounting methodology may be the best accounting practice employable in a particular culture. The concept of cultural relativism inhibits value judgments. If a given culture or society is satisfied with the accounting information generated by its system, a criticism may not be relevant. An inference may be drawn that a particular accounting system may be "the best possible system" for a society because it reflects that society's cultural variables and technology.

IAS will someday be established and enforced for the majority of nations. Their acceptance and enforcement must be done by individual nations on a voluntary basis. Understanding cultural variances will lend credibility to these standards and hasten their establishment, not by a few industrialized nations, but by the world accounting community.

The ethnographic studies performed by cultural anthropologists, if considered, will assist in the establishment of IAS. At least an ethnographic perspective will provide an awareness of cultural differences. Such an awareness will contribute to an overall flexibility in establishing and enforcing IAS within the cultural parameters characteristic of every society.

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[31] Sy Cip, "Establishing and Applying Standards in Diverse Economic and Social Environments," *International World Accounting Challenges and Opportunities,* ed. John Burton (New York: Arthur Young, 1981), pp. 85-96.

International Harmonization of Accounting: The Contribution of the EEC Fourth Directive on Company Law

W. S. TURLEY*

In July 1978, the Council of the European Economic Community (EEC) adopted the Fourth Directive on Company Law. This directive is part of an overall program to harmonize the law of member states relating to the regulation of companies. It deals specifically with requirements for company accounts and provides regulations governing the content and format of accounts, valuation methods, and so on. Previous articles in this journal have described some of the provisions and effects of the directive and have outlined its development.[1]

EEC member countries are obliged to implement the recommendations of council directives in their national legislation. Consequently, the Fourth Directive is potentially a major source of harmonization of accounting among countries in the EEC. This legal force contrasts with other international recommendations on accounting practice. Con-

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[1] C. W. Nobes, "Harmonization of Accounting within the European Communities: The Fourth Directive on Company Law," *International Journal of Accounting* (Spring 1980): 1-16; and R. A. Burnett, "The Harmonization of Accounting Principles in Member Countries of the European Economic Community," *International Journal of Accounting* (Fall 1975): 23-30.

sideration of the effect of the Fourth Directive has relevance not only for accounting within the EEC but also for the issue of harmonization of accounting in general.

This article presents some conceptual issues relevant to an evaluation of the contribution that the Fourth Directive will make to the harmonization of accounting in the EEC. The concept of harmonization underlies the proposal and adoption of the directive, and the application of this concept in the area of financial reporting will be discussed. The contribution of the directive will then be evaluated, with reference to its development, content, and implementation.

It will be argued that the differences which exist in the form and content of accounts in different countries illustrate more fundamental differences in the socioeconomic environment which determines accounting practice. Attempts to harmonize company financial reporting should consider the reasons underlying the different accounting practices among the nations.

HARMONIZATION

In evaluating the impact of the Fourth Directive on company reporting, it is appropriate to consider the objective(s) this implementation is intended to achieve. The directive is part of a legislative program to harmonize all aspects of company law. Therefore, a basic objective of the directive is to harmonize company reporting practices in EEC member states.

In one sense, "harmonization" is simply a means to facilitate the broader objectives of the EEC, rather than an end in itself. Such objectives were stated both at the time of the original proposal of the directive and at its final adoption by the Council of the European Communities. It was argued that the diversity of accounting practice within the EEC requires harmonization because:

> This situation [of diverse accounting practice] may be prejudicial to the fusion of national markets into a common market operating as an internal market. Otherwise competition . . . will continue to be distorted artificially.
>
> . . . these differences may also be prejudicial to the rational orientation of capital investment.[2]
>
> . . . it is necessary . . . to establish . . . minimum equivalent legal requirements as regards the extent of financial information that should be made available to the public by companies that are in competition with one another.[3]

[2] Extract from Commission of the European Communities, "Proposal for a Fourth Directive on the Annual Accounts of Limited Liability Companies," supplement to *Bulletin of the European Communities*, no. 12 (1971).

[3] Extract from "Fourth Council Directive," *Official Journal of the European Communities*, no. L222/11 (14 August 1978).

These objectives of promoting trade and capital markets, and removing competitive advantage, may broadly be called the "common market" objectives of the EEC. In the final analysis, they represent the goals underlying the desire for harmonization of accounting practice. Harmonization is a means to promote these goals.

If harmonization of accounting is the objective being pursued within the Fourth Directive, the meaning of the concept of harmonization as applied to financial accounting must be fully understood. A general definition of a harmonized system is that it should form "a consistent or orderly whole."[4] This implies that legislation to promote harmonization should be concerned with removing inconsistencies.

In the field of financial accounting in the EEC, sources of inconsistency may be identified both in the diverse practices adopted in different countries, and also in the conceptual foundations underlying those practices. Consequently, attempts to harmonize accounting within the EEC should consider both practical and conceptual dimensions.

A number of different aspects or levels of harmonization of financial accounting can be identified:

1. Standardization of disclosure requirements governing the presentation of company accounts;
2. Agreement regarding the principles which should be applied in the preparation of accounts; and
3. Agreement on the fundamental objectives of producing accounts, and the users and purposes that accounting reports are intended to serve.

Comparative studies of financial accounting within the EEC have tended to concentrate on the differences that exist in the format and presentation of company accounts (level 1). Consequently, the emphasis has been placed on harmonization in that area, with a resultant lack of consideration of the more conceptual areas (levels 2 and 3).

Emphasis on the presentational differences in accounting practice has resulted in the terms "harmonization" and "standardization" being used interchangeably. This approach assumes that standardization of practice will provide a harmonized system of accounting throughout the EEC. This may not be the case, since the same outward practice may be interpreted in different ways by users in different countries, given environmental and conceptual differences among countries. Harmonization is not equivalent to uniformity of practice. Rather, it includes agreement at a more fundamental level, and any standardization of practice should follow from that agreement.

[4] *Concise Oxford Dictionary.*

The thesis of this article holds that it is not possible to separate the different aspects of harmonization identified earlier. The differences in content and presentation of accounts which exist among countries are indicative of differences present in the conceptual basis of financial accounting. If harmonization is considered necessary, it should be pursued at all levels, not simply in the area of the format and content of accounts.

Evidence of the differences in the conceptual bases of national accounting systems can be obtained by reference to comparative studies of accounting models in different countries and by reference to the development of the Fourth Directive itself.

COMPARATIVE ACCOUNTING MODELS

Accounting cannot be separated from the environment it serves. Differences found in company accounting practice in various countries are symptomatic of variations in the environments which have determined that accounting practice. The economic, social, political, and fiscal environment of a country influences its accounting objectives, principles, and practices. As Frank stated:

> If environmental factors play an important role in the development of accounting concepts and practices, and if these environmental factors differ significantly between countries, then it would be expected that the accounting concepts and practices in use in different countries also differ.[5]

The dual aspects of the classification of accounting practices in different countries and the identification of environmental variables influencing those practices have been the subject of a number of studies.

Seidler outlined a number of models which he claimed provided basic "spheres of influence" for accounting practice in most of the Western world: the British model, the American model, and the Continental European model.[6] In presenting this classification, he discussed traditional colonial associations, the legal framework, the taxation system, and international capital flows as significant in determining adherence to a particular model.

In contrast, Mueller presented a classification based on the general orientation of the system rather than particular national models.[7] He presented four systems of accounting as a classification covering "the multiplicity of national accounting concepts and practices."

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[5] Werner G. Frank, "An Empirical Analysis of International Accounting Principles," *Journal of Accounting Research* (Autumn 1979): 593-605.

[6] Lee J. Seidler, "International Accounting: The Ultimate Theory Course," *Accounting Review* (October 1967): 775-81.

[7] Gerhard G. Mueller, *International Accounting* (New York: Macmillan, 1967).

1. Macroeconomic-oriented systems, where the main use of accounting information is by the government in regulating the economy — for example, Sweden.
2. Systems with a microeconomic basis — the Netherlands.
3. Systems with an accounting practice developed on the basis of existing business practice — the United Kingdom.
4. Standardization systems in which companies are required to use a uniform format and terminology in preparing accounts — West Germany.

More recently, the American Accounting Association (AAA) and Frank have presented additional classifications of comparative accounting systems. The AAA study identified five major "zones of influence": British, Franco-Portuguese-Spanish, Germanic-Dutch, U.S., and Communist. This comparative analysis involved the use of a comprehensive set of environmental variables, covering five main categories: (1) general economic factors, (2) socioeconomic information, (3) financial- and accounting-related criteria, (4) characteristics of the public accounting profession, and (5) characteristics of auditing.[8]

Frank used factor analysis of accounting principles and reporting practices to identify four major groupings: (1) British Commonwealth, (2) Latin America, (3) Continental European countries, and (4) U.S.-influenced countries.[9] His study attempted cultural and economic analysis through variables representing language, economic structure, and trade patterns. He concluded that the "hypothesis that the cultural and economic environment in a country influences its accounting principles is also supported by this study."[10]

Taken together, the studies just mentioned provide strong evidence for the idea that accounting practice is related to its environment. Choi and Mueller presented a list of fifteen environmental variables ranging from the type of economy and legal system to factors, such as general levels of eduaction, which they hypothesized would influence the system of accounting in any country.[11]

This discussion intends neither to argue the superiority of any particular classification of accounting system, nor to establish a definitive list of environmental influences. Rather, the purpose is to show that,

[8] American Accounting Association, "Report of the American Accounting Association Committee on International Accounting Operations and Education," *Accounting Review* (Supplement 1977): 67-119.
[9] Frank, "Accounting Principles."
[10] Ibid., p. 604.
[11] Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978).

given the impact of environmental variables on accounting practice, the diversity of practice within the EEC is indicative of more fundamental differences among member states regarding the role of accounts. Since the studies cited were based on accounting systems worldwide, the validity of this assertion concerning the EEC is dependent on the degree of divergence within the EEC with respect to significant environmental variables.

A detailed analysis of European accounting systems is beyond the scope of this article. Nobes has discussed some of the major differences in accounting practice among countries in the EEC, for example the concept of fair presentation and the relationship between accounting practice and tax law.[12] It may be useful, by way of illustration, to suggest some environmental differences within the EEC which may have influenced accounting practice in member states.

Capital Structure and Capital Markets

The balance between debt and equity financing of companies varies throughout the EEC as does the extent of activity in equity capital markets. For example, the level of gearing in Italy is over seven times that in Holland, and the number of quoted companies in the United Kingdom is approximately 30 percent greater than that in the remainder of the EEC combined![13] These variations can have an impact on financial reporting.

The Role of the Law

The EEC includes countries whose societies are based on legal models which are fundamentally different, and this is reflected in the role of the law in accounting regulation. For example, in the United Kingdom, the purpose of legislation has been to provide a framework for company reporting, allowing a considerable degree of scope for the accounting profession to interpret the law. This contrasts with the position in countries, such as France and Italy, where legislation has specified a very detailed codification of reporting requirements.

Concept of Business Organizations

Some EEC member states take an "entity" view of the firm, while other countries apply a "proprietary" view. The Netherlands, for example, adopts the entity view with a consequent emphasis in accounting on measuring business income from the viewpoint of the firm. This con-

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[12] Nobes, "Harmoniaztion."

[13] See M. Lafferty, *Accounting in Europe* (London: Woodhead Faulkner, 1975), Appendix 5, p. 388.

trasts with the interpretation in the United Kingdom where the proprietary view of the company has prevailed, leading to emphasis on reporting for shareholders.

The areas referred to here illustrate the spectrum of environmental variables within the EEC, and, when combined with the evidence from studies of comparative accounting models on a worldwide basis, provide some justification for postulating that there is significant variation at a conceptual level among the accounting systems in EEC member states.

A more comprehensive analysis of national practices, environmental variables, and the conceptual basis of accounts in EEC member states is, therefore, necessary for rational harmonization proposals. "A comparative study of such concepts and conventions is an indispensable condition before any international standardization and harmonization can be achieved."[14]

DEVELOPMENT OF THE FOURTH DIRECTIVE

Additional evidence for the argument that the approach to accounting in different countries varies at a fundamental or conceptual level is provided by the development of the Fourth Directive itself.

Many changes have occurred since 1965 when the first steps were made toward harmonization of company accounting practice.[15] While it is unnecessary to reproduce the entire history of the Fourth Directive from 1965 to the present day,[16] it is interesting to consider one particular area of change: the extent to which general principles of accounting are included in the directive.

The original draft of the Fourth Directive, published in 1971, contained the requirement that "the annual accounts shall conform to the principles of regular and proper accounting" and further, that these accounts should reflect the company's position "as accurately as possible."[17] In addition, while accounts should "comply with basic accounting principles," it was decided that such principles should not be included in harmonization legislation,

> as clear limits cannot be set in respect of their content and significance. A certain codification of these principles will rather be the province of the pro-

[14] L. Perridon, "Accounting Principles: An Academic Opinion," *European Journal of Accountancy* (*Journal U.E.C.*) (October 1974): 213-24.

[15] The first study group to investigate harmonization of accounting was appointed by the EEC Commission in 1965.

[16] For a discussion of the development of the first and second drafts of the Fourth Directive, see Burnett, "Harmonization."

[17] Extracts from the first draft proposals for a Fourth Directive, submitted to the Council of Ministers, 10 November 1971.

fessional bodies in the member states, following developments in law and in practice.[18]

The revised directive of 1974 contrasted sharply with the position just outlined. It required that the accounts show "a true and fair view of the company's assets, liabilities, financial position and results."[19] Further, the revised draft included specification of certain "general principles," namely the going concern, consistency, prudence, and accruals principles.[20]

Between the first and second draft directives, there were major changes from "accurate" accounts to a "true and fair view" and from no statement of principles to specification of general principles. During the period between the two draft directives, the single most significant event in the EEC was the enlargement of the community from six to nine member states, with Denmark, Ireland, and the United Kingdom being admitted to membership. It is significant that in two of those new member states (Ireland and the United Kingdom), the requirement for accounts to show a true and fair view was already established by law, and that the professional bodies in those two countries had issued a statement of standard accounting practice, proposing the same "fundamental accounting concepts" as were included as general principles in the revised draft of the Fourth Directive.[21]

It could be argued that expansion of the community meant not only that harmonization proposals had to encompass greater diversity in accounting practice, but also that provisions for fundamental differences in the conceptual approach to accounts had to be made. The admittance of Ireland and the United Kingdom to membership meant that a new approach, as exemplified by the idea of a true and fair view, had to be incorporated into the harmonization legislation. As a result, the changes described previously occurred.

The fact that such changes were necessary provides additional evidence that harmonization of accounting practice cannot be divorced from the harmonization of the underlying socioeconomic systems.

CONTENT OF THE FOURTH DIRECTIVE

The content of the Fourth Directive is examined here in terms of the different aspects of harmonization considered in the first section of

[18] EEC Commission, explanatory report accompanying the proposal for a Fourth Directive (November 1971).
[19] Fourth Directive, Article 2, par. 3.
[20] Ibid., Article 31.
[21] Accounting Standards Committee, Statement of Standard Accounting Practice No. 2, "Disclosure of Accounting Policies" (November 1971).

this article. This examination is relevant to an assessment of the degree of harmonization that can be achieved by implementation of the directive.

Standardization of Disclosure Requirements

The vast majority of the provisions in the directive concern the harmonization of rules regarding the format and content of company reports — the formal disclosure requirements. The directive provides standardized formats governing the presentation of accounts, valuation rules, and so forth.

It is sufficient for the purposes of this article simply to note that the bulk of the directive is concerned with this area of disclosure requirements. Indeed, there is little within the directive that does not refer specifically to disclosure.

It should be noted, however, that a large number of options and alternatives are provided.[22] The reason for this would seem to be to allow member states to implement the directive with the least possible disruption to their existing legislative requirements. If maximum use is made of the permitted variations, the result could be that even in the area of standardization of the form and content of accounts, little is achieved. The implementation of the directive by individual countries is considered in a subsequent section.

Accounting Principles

The two main areas of the directive that may be described as possessing conceptual content were discussed previously in the section dealing with the development of the directive. They are the requirements that the accounts show a "true and fair view" and for the statement of general principles in Article 31 of the directive.

True and fair view. The concept of a "true and fair view" is well established in the United Kingdom and Ireland [23] but is unfamiliar to accountants in many other European countries. In Italy, the equivalent requirement is that the accounts should show the company's position with "clarity and precision."[24] How the idea of a true and fair view will be interpreted and applied in those countries where it is not an existing requirement must be questioned. It can be argued that even in the United Kingdom and Ireland, the concept of a true and fair view is poorly understood and subject to many different interpretations. Some would interpret it as equivalent to the legal concept of "reason-

[22] There are over fifty areas of option within the articles of the directive.
[23] 1948 Companies Act, Section 147.
[24] Civil Code, Article 2423.

ableness," some as the application of the concept of materiality, and others as meaning "relevant and objective."[25]

The "true and fair view" of a company may vary according to the perspective which is adopted by the person taking the view. Different countries within the EEC may emphasize the importance of different groups of users of accounts, such as shareholders, creditors, and trade unions. The differing perspectives of these groups could mean that they would form a different "true and fair view" of a company.

The Fourth Directive does not provide any definition of what is meant by "true and fair view," nor does it state which perspective should be adopted in forming that view. This is similar to the existing position in the United Kingdom that although a true and fair view is required by law, it is not clearly defined in legislation. It may be expected that EEC member states will interpret and apply this concept in terms of their existing approach to company accounts and, as a result, the degree of harmonization achieved may be slight.

The concept of true and fair view is imprecise and inadequate without more comprehensive definition. It remains open to the subjective interpretation of individual member states and consequently may be an ineffective instrument of harmonization.

General principles. Article 31 of the Fourth Directive specifies general principles to be used in the preparation of accounts. These principles are the going concern, consistency, prudence, and accruals (or matching) principles. It is important to question why this particular set of principles is regarded as an adequate basis for the preparation of accounts.

As noted earlier, these principles are very similar to the four "fundamental concepts" of accounting set by the professional bodies in the United Kingdom and Ireland in 1971. An examination of Statement of Standard Accounting Practice (SSAP) No. 2, which specified these concepts, suggests that this choice, made by the accounting profession in 1971, was based on grounds of expediency rather than theoretical justification.

It was felt at that time that a more comprehensive approach would involve "many more propositions than the four fundamental concepts referred to here. It is, however, expedient to recognize them as working assumptions having general acceptance at the present time."[26] Further,

[25] See T. A. Lee, *Company Auditing: Concepts and Practices* (London: Gee, 1972), pp. 36-37.

[26] Statement of Standard Accounting Practice No. 2, Note 2.

SSAP No. 2 states that these rules could be "capable of variation and evolution as accounting thought and practice develop."[27]

There is little evidence in the Fourth Directive that any development has occurred or that a more comprehensive approach has been adopted. The approach of the profession in the United Kingdom and Ireland, based on the expedient of "general acceptance," appears to have been accepted in the preparation of the Fourth Directive. While the concept of general acceptance is important in European accounting harmonization, its use as an overriding criterion will result in superficial legislation. As Stamp stated:

> The task of "harmonizing" within the EEC is formidable indeed, and it will not be surprising if the reconciliation of conflicting interests provides many problems. We must not allow the solutions to these problems to take the form of a reduction to an average or to a lowest common denominator.[28]

The Socioeconomic Role of Accounts

Regarding the question of objectives and the fundamental role of accounts in society, the directive is, perhaps not surprisingly, silent. The earlier discussion of harmonization outlined certain objectives which were stated in EEC documents relating to the directive, but not in the directive itself. These objectives, such as the need to remove competitive advantage, are those for the harmonization of company accounts, and should be distinguished from the objectives that the accounts themselves are intended to fulfill.

The resolution of the Council of the European Communities, which adopted the Fourth Directive, referred to the need to ensure "protection of members and third parties." Such a generalized statement, outside the text of the directive, cannot be evaluated as providing an EEC perspective on the role of accounts in society.

It must be recognized that harmonization at this level would be very difficult to achieve. Indeed, if society is fundamentally different in each EEC country, there may be doubt as to whether harmonization in this area is possible. The potential danger of standardization of the form and content of accounts without harmonization of objectives, however, must also be noted. The Fourth Directive does not provide any guidance concerning the objectives of accounts, and so fails either to challenge or reconcile differences between EEC member states.

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[27] Ibid., par. 2.

[28] E. Stamp, "The EEC and European Accounting Standards: A Straightjacket or a Spur?" *Accountancy* (May 1973): 9-15.

IMPLEMENTATION OF THE DIRECTIVE

As stated previously, the Fourth Directive provides options and alternatives in a large number of areas, and individual governments have discretion over the particular provisions implemented in these areas. Consequently, it is important to examine not only the general nature of the content of the directive, but also the form in which it is implemented in different countries.

When the directive was adopted in 1978, its requirements were intended to be operational in all EEC member states by February 1982 at the latest. In fact, at that date only one country, Denmark, had completely implemented the directive while other countries varied widely in their positions regarding implementation. In the United Kingdom, the directive had been incorporated into law through the 1981 Companies Act, but the date from which the provisions should be effective had not been determined. In some countries, legislation had been drafted and presented to the national legislature, while in others, preliminary discussions regarding how implementation should be achieved were still taking place.

Ultimately, the speed of implementation is less important than the degree of consistency among countries once legislation is in effect. Analysis of this consistency cannot be made until national legislation has been approved. Draft legislation and other proposals so far available, however, do indicate possible inconsistencies with respect to some of the areas discussed previously in this article.

Once such area is the standardization of the format for company accounts. In France, for example, proposals provide a single standardized format which companies must follow. This contrasts with the position in the United Kingdom where the directive has been applied in a form which permits companies to use one of four possible income statements and either of two balance sheet formats. The French adherence to a single format reflects an approach to the preparation of accounts which includes an objective to provide precise and homogeneous data capable of aggregation to form national accounts. In the United Kingdom, the traditional philosophy has been that legislation should specify the broad framework for company reporting but allow flexibility regarding the detail of format, and so on, within that framework. Following that approach, the directive has been implemented in a manner intended to preserve flexibility and disturb the current reporting framework as little as possible.

In the area of measurement and valuation, the conceptual diversity among countries is illustrated by the attitude of different EEC states

toward the provisions of the directive which allow current value accounting. Although the directive is formulated fundamentally on the basis of historic cost accounting, it does provide individual governments with discretion to permit current value accounting. In some countries, there has been a desire to take advantage of this area of flexibility. The proposals for implementing the directive in the Netherlands not only allow, but in certain circumstances may require, companies to use current values in their accounts. In the United Kingdom, the Accounting Standards Committee had already recommended a particular form of current cost accounting for use as either the main accounts or as supplementary information.[29] Consistent with this situation, the legislation implementing the directive includes the sections relating to the use of current values. In contrast, in Belgium, the use of a method of valuation which accounts for inflation is expressly forbidden. Similarly, in Germany, proposals have suggested specifically prohibiting inflation accounting.

Accounting for the effects of inflation on accounting values, perhaps more than any other issue, calls for an evaluation of the conceptual basis of preparing accounts. It would appear that the Fourth Directive has not promoted international harmonization in the area of inflation accounting.

It is likely that the directive will have greatest effect in the area of disclosure requirements governing the content of accounts. Implementation of the directive should result in considerable standardization with respect to the disclosure of items of information in different countries. However, there is some evidence to suggest that there may be inconsistencies in the manner individual items are interpreted. For example, extraordinary items must be disclosed, but are not defined in the directive. There may be inconsistencies both in the identification of extraordinary items and the manner in which they are treated in accounts in different countries.

Until implementation has been completed, conclusions regarding the degree of harmonization achieved by the directive can only be tentative. However, legislation in the different EEC member states will likely continue to reflect fundamental differences regarding the nature and role of company accounts.

SUMMARY AND CONCLUSIONS

This paper has presented the view that differences in accounting practices among countries are to a large extent indicative of more funda-

[29] Accounting Standards Committee, Statement of Standard Accounting Practice No. 16, "Current Cost Accounting" (April 1980).

mental conceptual differences regarding accounting reports. Evidence in support of this view was drawn from comparative studies of accounting systems and with reference to the development and implementation of the EEC Fourth Directive. Given this position, harmonization of accounting requires more than a simple standardization of disclosure requirements. The additional aspects of specification of accounting principles and agreement on the objectives of accounts should be addressed. Consideration should be given to the underlying socioeconomic environments which have influenced accounting practice in different countries. This may allow identification of the socioeconomic objectives of accounting and how these objectives may be served. "European accountants should define, as a first step in discussing the harmonization of accounting practices, the objectives which these practices are intended to serve."[30]

Examination of the content of the Fourth Directive reveals it has little to say with respect to harmonization in the "conceptual" areas of financial reporting. Additionally, the validity and likely effectiveness of those elements of a conceptual nature that are included is subject to considerable doubt. Consequently, the Fourth Directive would appear to offer harmonization only at the level of standardization of disclosure requirements. If the directive results simply in uniformity of practice with no guidance as to the underlying basis of that practice — while an outward appearance of harmonization may be presented, perhaps through taking the "lowest common denominator" of existing practices — little will be achieved in terms of real harmonization of the underlying accounting systems. Further, consideration of the form in which the directive will be implemented in different countries has suggested that differences in approach to company accounts will be maintained rather than removed.

This discussion has a number of implications. Fundamentally, the question should be raised as to whether full harmonization of accounting systems throughout the EEC is possible. In a wider context, Stamp has argued that "complete international harmonization of accounting standards is probably an impossible goal, because of environmental differences."[31] Given the relationship between accounting practice and the socioeconomic environment of a country, which shapes the objectives of accounts, harmonization of the different societies may be a necessary prerequisite to harmonization of accounting. If this is so, the

[30] M. W. E. Glautier, "Accounting and the Socio Economic Framework of Western-European Countries," *European Journal of Accounting* (*Journal U.E.C.*) (April 1974): 106-11.

[31] Stamp, "Accounting Standards."

implementation of the Fourth Directive may represent an ineffective or even a backward step. Additionally, the question of whether national legislation is the best way to promote harmonization of accounting arises.

The points raised here also have implications for the feasibility and appropriateness of attempts to provide harmonization of accounting outside the EEC, for example, through international accounting standards. Such harmonization should involve recognition and reconciliation of fundamental differences in accounting systems rather than the removal of superficial differences through standardization.

On the positive side, the Fourth Directive could be defended on the grounds that it represents a pragmatic attempt to move toward the ultimate goal of achieving harmonization of accounting and socioeconomic systems. It may represent the best that is currently attainable and its implementation should promote more fundamental harmonization in the future. If this is the case, then the limitations of the directive should be clearly understood and research directed toward the resolution of the remaining problems identified here.

Overall, it is clear that the Fourth Directive will not result in complete harmonization of accounting systems throughout the EEC. More explicit consideration of the different socioeconomic environments of EEC member states is necessary before such harmonization can be achieved.

Foreign Currency Translation: An Evaluation

JON R. NANCE and ROGER A. ROEMMICH*

INTRODUCTION

Since the events of 1969 to 1973 that led to the current period of floating exchange rates, translating financial statements denominated in foreign currency has been an accounting problem of considerable economic importance. In December 1973, the Financial Accounting Standards Board (FASB) issued Statement of Financial Accounting Standards (SFAS) 1, which moved the accounting profession from a position of lassiez faire to requirement that extensive disclosures of a company's translation practices be made. In 1975, the FASB adopted SFAS 8, which required a single translation method. In December 1981, the FASB adopted a new standard for foreign currency translation, SFAS 52.[1] The method of SFAS 52 combines conventional, historical cost-based asset measurement in the foreign currency with translation at the current rate and deferral of translation gains and losses.

This article evaluates SFAS 52 and several alternative translation standards. Evaluation requires a conception of attributes considered desirable. Unfortunately, different attributes are considered desirable by different interested parties, and the accounting profession is faced with a theoretical and practical problem in selecting evaluation criteria — the problem of social choice.

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[1] Financial Accounting Standards Board, *Statement of Financial Accounting Standards Number 52* (Stamford, Conn.: FASB, 1981).

The social choice problem has not been resolved in the accounting literature. Demski considers attempts to use qualitative characteristics, such as relevance and verifiability, in the establishment of accounting standards.[2] His "Impossibility Theorem" shows that, with certain assumptions regarding users of financial statements, qualitative characteristics may not be used to develop an "optimal" normative theory of accounting. The FASB must, however, set accounting standards and has chosen in Statement of Financial Accounting Concepts (SFAC) No. 2 to profess that qualitative characteristics will be used for the purpose of standard establishment.[3] Cushing has noted that relaxation of the limiting assumption of heterogeneous users invalidates Demski's proof of the Impossibility Theorem.[4] The present article follows the FASB in assuming that qualitative characteristics may be used to distinguish accounting alternatives. The criteria applied by the authors assume a financial statement user group with tastes within a prescribed realm of similarity.[5]

EVALUATION CRITERIA

SFAC 2 argues that comparability and representational faithfulness are desirable qualitative characteristics of financial statements.[6] The authors assume that translated financial statements of foreign subsidiaries should be comparable to the financial statements of domestic parents and other domestic corporations. This is clearly a desirable limitation to impose on translation methods if the conventional practice of consolidating the translated financial statements of a foreign subsidiary with those of its domestic parent is to be continued.

The financial interaction of a foreign subsidiary and its domestic parent is normally mediated by a currency exchange market. Compari-

[2] Joel Demski, "Rational Choice of Accounting Method for a Class of Partnerships," *Journal of Accounting Research* (Autumn 1973): 176-90.

[3] Financial Accounting Standards Board, *Statement of Financial Accounting Concepts Number Two* (Stamford, Conn.: FASB, 1979).

[4] B. Cushing, "On the Possibility of Optimal Accounting Principles," *Accounting Review* (April 1977): 308-21.

[5] No absolute justification for the use of qualitative characteristics to establish accounting standards is, or can be, given. The intention of this article is rather to assume with the FASB concept statements that reliance on qualitative characteristics is reasonable, and to see where this reliance leads. Comparison of the conclusions reached in this article with the standard actually adopted may then provide insight into the relevance of FASB concept statements to standard establishment. It is in this spirit that the above rationale has been presented.

[6] FASB, *FAS 2, Financial Accounting Concept Number 2,* especially par. 63-80, 111-22.

son of the economic events described by translated and domestic financial statements requires an economic theory of that market. This article describes and utilizes economic theories of currency exchange markets that are consistent with the available empirical evidence.

Comparability of translated and domestic financial statements provides guidance for the formulation of a translation standard only if the economic events described by translated statements are essentially similar to economic events described by domestic statements. There is no need to describe economic events arising from fluctuations in the currency exchange rate in domestic statements. The conventional accounting model includes no description of events of this type. Thus, the comparability criterion provides no direct guidance for their description in translated statements.[7]

The formulation of a method of description in translated financial statements of economic events arising from fluctuations in the currency exchange rate requires the use of an additional criterion supplementing the criterion of comparability. The authors assume that the accounting representation of these economic events should faithfully describe the events. Since the conventional accounting model for domestic financial statements is taken as given, the representational faithfulness of the translation standard recommended by these authors is limited by defects in the conventional accounting model.

The conventional accounting model is based on measurement of identifiable assets and changes in identifiable assets. The economic consequences of a change in exchange rates may be different for a firm taken as a whole than for the identifiable assets (individual and collective) of that firm. For this reason, no method of financial statement translation consistent with the conventional accounting model can faithfully represent the impact of a change in exchange rates on the value of a firm taken as a whole. The authors assume that consolidation and comparability are given higher priority than representational faithfulness. For this reason, representational faithfulness is applied only to the impact of economic events on the identifiable assets of a firm, not to the impact of economic events on the firm taken as a whole.

EXCHANGE RATES

All of the financial statement translation methods used in practice are

[7] As discussed later in footnote 33, a different view is possible but appears to lead to a description which represents a step backward from current practices.

based on translation rates determined from currency exchange markets.[8] Functions of current and past market exchange rates are used to translate every asset category. Any attempt to translate economic events must be based in part on an understanding of the economic meaning of the exchange rate and of changes in the exchange rate.

The exchange rate is the relative price of two currencies. In an artificial world of stationary economic variables and negligible transportation costs, it could be convincingly argued that this price is set to equalize the real prices of equivalent commodity bundles in the two countries. This is the purchasing power parity theory.[9]

In the real world, economic variables are not stationary. The economic activity cycles of different countries are not synchronous; the exchange rate is a function of time. If the exchange rate is used to translate asset values, then some economic understanding of its secular variation is necessary. Although there is at best a limited consensus among economists at this time, the authors believe the empirical evidence regarding secular variations in exchange rates is consistent with the view which follows.[10]

Purchasing power parity holds in the long run. This has been adequately demonstrated over intervals of both fixed and floating exchange rates.[11]

In periods of floating exchange rates, purchasing power parity does not hold in the short run. Departures from purchasing power parity may be relatively large. The short-run dynamics of exchange rate movements are complex, depending upon the relative supply of and demand for the two currencies. This dependence is difficult to specify,

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[8] Other methods have been proposed, including methods based on purchasing power parity considerations developed outside the exchange markets. While these methods may have some theoretical interest, they are unlikely to be considered seriously for adoption as financial accounting standards, and so will not be considered in this paper.

[9] J. Bilson, "The Current Experience with Floating Exchange Rates: An Appraisal of the Monetary Approach," *American Economic Review* 68 (1977): 392; idem, "The Monetary Approach to the Exchange Rate: Some Empirical Evidence," *International Monetary Fund Staff Papers* (March 1978): 48; R. Dornbush, "Expectations and Exchange Rate Dynamics," *Journal of Political Economy* 84 (1976): 1161; R. Levich, *The International Money Market: An Assessment of Forecasting Techniques and Market Efficiency* (Greenwich, Conn.: JAI Press, 1979).

[10] The view advanced here is not essentially different from that of Robert Aliber and Clyde Stickney, "Accounting Measures of Foreign Exchange Exposure: The Long and Short of It," *Accounting Review* 50 (1975): 44. Considerable evidence in favor of that view has accumulated since the time of their article, however. It is this evidence, described in the present article, that makes it reasonably compelling.

[11] M. Lee, *Purchasing Power Parity* (New York: Marcel Dekker, 1976).

because exchange rates, interest rates, and inflation rates are tightly coupled.[12]

The relaxation time required for the exchange rate to move to a stationary value dictated by a stationary purchasing power parity ratio is two years, or somewhat less.[13] This relaxation time determines the boundary between the "short run" and the "long run." Thus, the one-year interval normally used to define "current" in accounting is comfortably short run. Purchasing power parity does not hold. On the other hand, the value-weighted average age of U.S. manufacturing plants is approximately ten years,[14] implying a service life of about twenty years (assuming roughly constant capacity). The purchasing

[12] To give some indication of the situation, two types of exchange rate theories are described here briefly.

One class of attempts to explain exchange rate dynamics as the class of dynamic purchasing power parity theories (Dornbusch, "Exchange Rate Dynamics"; Bilson, "The Monetary Approach"). In these theories, purchasing power parity is regarded as the determinant of long-run equilibrium in the exchange markets, but the approach to this equilibrium is affected by speculative forces expressed through interest rate differentials in the two currencies. The rationale for these theories is that commodity markets apparently react to changing circumstances much more slowly (on a time scale of about two years) than do financial markets. Whatever the validity of the rationale, the dynamic purchasing power parity theories are rather good predictors. For example, a model by Bilson of the pound-deutsch mark exchange rate described the rate over an eight-year period with a root-mean-square (RMS) of 4 percent (Bilson, "The Monetary Approach"). This compares with an RMS error of 18 percent for a simple purchasing power parity model.

A second class of exchange rate theories is the class of monetary theories (Jacob Frenkel, "A Monetary Approach to the Exchange Rate: Doctrinal Aspects and Empirical Evidence," *Scandinavian Journal of Economics, 2* [1976]: 200; Bilson, "The Monetary Approach"). In these theories, the purchasing power parity condition is regarded as a relation between unobservable "true" price indices. The true price indices are eliminated from the relation which defines purchasing power parity by the substitution of assumed relationships between the supply of and the demand for the two currencies. These theories are also reasonable predictors. The monetary theory tested by Bilson ("The Monetary Approach") on the deutsch mark-pound rate had an RMS error of 6 percent over the period 1970-77. While this error is numerically slightly larger than that for the dynamic purchasing power parity theory model applied to the same currencies in the same interval, there may be reasons based on internal consistency for preferring the monetary theory.

[13] The term "relaxation time" is used here in a heuristic sense. In a simple dynamical model, relaxation time is the time required for a variable to reduce its distance from equilibrium to 1/e, or about 37 percent of the initial value.

In a dynamical model fitted to the deutsch mark-pound exchange rate, Bilson found a relaxation time of tweny-one months (Bilson, "The Monetary Approach"). This is consistent with the theoretical view of Dornbusch, and there is no reason to believe that this time is significantly different from different major currencies.

[14] Department of Commerce, *Statistical Abstract of the United States* (Washington, D.C.: U.S. Government Printing Office, 1978).

power parity condition should hold to within a few percent over such a long interval.[15]

The spot exchange market is weakly efficient, or nearly so, and the exchange rate moves as a random walk with a drift. Past data do not predict more than the drift and the variance of future spot rate movements. It must be admitted that regression and autocorrelation models have been constructed which provide better than random walk predictions.[16] These are a posteriori models, however, predicting the data from which they were constructed. Considering the time intervals involved, they are not necessarily inconsistent with weak efficiency. As is the case with other capital markets studies, a widespread belief in weak efficiency among theorists is apparently matched by a widespread disbelief among practitioners.[17]

Arbitrage considerations dictate that, whenever active futures markets exist, the difference between the rate set by a futures contract and the spot exchange rate should be determined by the differential between interest rates on equally secure investments in the two currencies. This is the interest rate parity condition.

Debt dominated in each of the currencies examined normally earns a variety of interest rates in a given time interval, depending on the type of debt instrument. Interest rates used to calculate the differential must be rates on investments in the same risk class, but comparison of risk classes of investments in different countries is difficult. In addition, transaction costs in real markets eliminate some arbitrage profit opportunities and inhibit precise and rapid adjustment of the exchange rate to available interest rate differentials. Finally, it is possible that certain currencies may be preferred to others because of features (for example, secrecy, or international negotiability) that are not reflected in interest rate differentials. For these reasons, the interest rate parity condition is unlikely satisfied precisely in real currency markets, but it is satisfied to a reasonable approximation. The work of Levich shows that if appropriate interest rates are selected and transaction

[15] A "few percent" is a judged estimate. A long interval of stable prices would allow the purchasing power parity condition to be satisfied to within a small fraction of one percent. Very unstable economic conditions could create departures larger than a few percent.

[16] For an extended discussion of the time series behavior of exchange rates and of forecasting models, see chapters 6 and 7 of the Levich source in footnote 9.

[17] Corporations regularly purchase exchange rate forecasts. However, a recent accounting textbook on multinational operations describes foreign exchange markets as among the most efficient of capital markets: see A. George, *Foreign Exchange Management and the Multinational Corporation: A Manager's Guide* (New York: Praeger, 1980).

costs are considered, the empirical evidence from exchange markets is consistent with the interest rate parity condition.[18]

The existence of integrated, efficient capital markets suggests that the *rate for futures,* where active futures markets exist, should be the best available prediction of the *future rate.*[19] Empirical support for this proposition is limited. The work of Levich[20] shows that spot rate forecasts based on the futures rate are approximately equal to forecasts based on interest rate parity with interest rates obtained from the Eurocurrency markets. A simple lagged spot rate model, however, made better predictions than the futures rate.[21]

Interest rate parity ties futures rates to interest rate differentials. Therefore, if the expected future spot rate is the futures rate, the future spot rate is also predicted by interest rate differentials. There is some empirical support for this hypothesis over time intervals covered by active futures markets (360 days for major trading currencies). Over longer time intervals, the best that can be said is that the hypothesis has not been refuted. Assuming rational investors and an integrated international capital market, the hypothesis is highly plausible.

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[18] See Levich, *The Money Market.* Transaction costs, determined by Levich from three-currency "triangular" arbitrage opportunities, have approximated one-half of one percent during the period of floating exchange rates.

[19] This statement assumes that no risk premium is available to speculators in the futures markets. A risk premium may be involved. As a by-product of the translation of financial statements carried out by one of the authors, it was determined that there was a small but significant *negative* correlation between *accounting* earnings and exchange rate variations (when the earnings were those of a foreign subsidiary and the rate was viewed from a domestic perspective) for both of the exchange rates used for translation. When coupled with other evidence of the connection between accounting and market measures, this *suggests* the existence of a small risk premium.

Separately, Robichek and Eaker found statistically significant but relatively small correlations between the prices of five of nine foreign currencies and the Standard and Poor's 500 Stock Index between June 1973 and June 1976. See A. Robichek and M. Eaker, "Foreign Exchange Hedging and the Capital Asset Pricing Model," *Journal of Finance* 33 (1978): 1011.

Because neglect of a risk premium provides a simple framework for the rational evaluation of accounting and economic measures of assets held in F, the existence of a risk premium is neglected in the work of this paper. It remains an issue deserving future consideration.

[20] Levich, *The Money Market.*

[21] The forecasting models of Levich were tested over twenty-seven combinations of currency and horizon in the interval 1967-75. The interest rate parity forecast, with interest rates from Eurocurrency markets, produced the lowest mean square error in nearly half of the cases. The rate for futures produced the lowest mean square error in only one case. The difference between the two models was, however, not large. It was, in the view of Levich, "generally small enough to be explained by transaction costs and sampling errors." For details of the model, see Levich, *The Money Market,* chap. 7.

The hypothesis is very useful in establishing accounting principles for translation because it provides interpretation of exchange gains and losses. This interpretation will be examined in the following sections.

ECONOMIC CONSEQUENCES OF EXCHANGE RATE VARIATION

In this section, it is assumed that an identifiable asset is located in F, a foreign country, and owned by a firm in D, the domestic country. The effect of a change in the exchange rate on the value of that asset, as viewed from D, is examined.

Current Assets

Conversion to F currency (or consumption) of current assets is expected within the current accounting period. F currency may be exchanged immediately for D currency in the spot market.[22] Neglecting the interval to realization, a fractional change in the spot rate for F currency produces the same fractional change in the value of a current asset.[23]

Changes in the exchange rate may occur in the interval between measurement of a current asset and its conversion to cash. The magnitude of the expected change is determined by the (known) interest rate differential at the time of measurement. The value of a current asset in D is thus just its net realizable value in F translated at the current spot rate, assuming appropriate discounting of that value *in F*.[24]

Plant

If components of plant have a ready market, the net realizable values of these components may be measured in the same way as the net realizable values of current assets. Changes in the exchange rate would then affect plant in the same way as they affect current assets. The present value of future cash flows generated by plant is a joint attribute of plant and the firm taken as a whole, and therefore is not relevant

[22] If conversion of F currency cash flows to D currency is impossible, F cash flows cannot be compared to D cash flows, and consolidation is inappropriate.

[23] This only follows, of course, if a change in the spot rate does not cause a change in the market value of the asset as measured in F currency. But it was argued in the last section that changes in exchange rates are only weakly correlated, at most, with changes in the general price level, in the short run. Commodity prices generally require an interval significantly greater than one year to adjust to changes in exchange rates.

[24] Conventional accounting practice is to neglect discounting when estimating the net realizable value of current assets. If the interest rate differential is not large compared to the interest rate in D, failure to discount in F will lead to errors which are similar in magnitude, although not identical, to the errors which arise from failure to discount in D. Arguments which justify neglect of discounting in D will then justify the same neglect in F.

to the problem of accounting for identifiable assets. In any case, the authors have reservations concerning its measurability.

Monetary Assets

As with other asset classes, the existence of a ready market allows translation of realizable value in F into D at the current rate.

Long-term monetary assets differ sharply from plant in that the present value of future cash flows is relatively insensitive to the future business prospects of the firm.[25] If there is a ready market for the asset, then the present value of future cash flows should closely approximate the market value. Even in the absence of a ready market, however, this value may be reasonably estimated and regarded as the economic value. To do this, the problem of translating a stream of future cash flows in F into D must be solved.

Interest rate parity provides a simple solution to the problem of translation. As viewed from D, the asset provides a stream of future F cash flows, to be converted into D flows by translation at the expected future spot rate. This stream of flows must be discounted to the present at the appropriate rate *in D*. Interest rate parity implies that the result of this computation would be the same as the result of discounting in F at the appropriate rate *in F,* and translating the discounted value into D at the current rate.

ACCOUNTING MEASURES AND TRANSLATION METHODS

The accounting measures of different classes of assets are distinct from the economic values of those assets. In this section, accounting measures will be reviewed, and the effect of translation on those measures will be examined.

Current Assets Other than Inventory

Most current assets are measured at realizable value with present value considerations neglected. Moreover, realizable value is normally the economic value of these assets. Translation at the current rate preserves both the accounting measure and the economic value, present

[25] The present value of future cash flows associated with long-term debt is, of course, somewhat sensitive to the future business prospects of the firm. The present value of a firm's debt depends, for example, on the rating given to that debt by rating agencies, and this rating depends upon the business prospects of the firm.

A sudden change in the exchange rate, considered by itself, has no effect on the considerations of the last paragraph. The weak efficiency of the exchange market ensures that the expected future change in the exchange rate is the same just after the monetary asset in the same proportion, whether this valuation is derived from market prices or net present value computations.

value considerations neglected. No other rate for translation appears reasonable, and no other rate is used in any of the translation methods to be examined later.

Neglect of present value considerations results in an overstatement of net realizable value by the amount of interest in the time period from measurement to realization. Since the discount rate is normally different in the two currencies, the amount of overstatement will also be different. If the interest rate differential is not large compared to the going interest rate in the domestic currency, however, the neglect of present value considerations in the domestic currency will justify the same neglect in the foreign currency.

Inventory

Inventory is unusual as a current asset in that its normal measure is cost. It has been argued elsewhere that the best measure of translated cost is cost in the foreign currency translated at the rate in effect at the time of purchase or production.[26] This argument was used to justify translation of inventory at historical rates.

If certain conditions, including purchasing power parity, were satisfied, historical rates translation of inventory would produce strict comparability between translated inventory measures and measures of domestic inventory. To illustrate, assume that replacement cost moves with the general price level and that gross margin is a fixed percentage of replacement cost. These assumptions are sufficient, although not necessary, to make the relation between accounting measure and economic value for foreign-based inventory the same as for domestic inventory.

Purchasing power parity, however, *does not hold* for the time intervals normally encountered in the purchase or production and disposition of inventory. The average age of inventories in the United States is approximately forty-five days.[27] The relaxation time of the exchange rate to the rate dictated by purchasing power parity is approximately two years. Exchange rate fluctuations over a forty-five day interval are determined by complex market factors only slightly related to changes in relative prices over the same interval. For this reason, inventory held in a foreign country is subject to an element of economic risk, caused by fluctuations in the exchange rate, that has no parallel in domestic operations.

Translating historical cost-based inventory at historical rates does

[26] See, for example, the rationale for FASB, *FAS 8*.
[27] Department of Commerce, *Statistical Abstract*.

not consider that inventory is subject to exchange rate risk and so does not faithfully represent the economic impact of exchange rate fluctuations on foreign inventory. Translating inventory measured at realizable value at the current rate accurately represents the economic consequences to inventory, but reduces comparability between foreign inventory and domestic inventory measured on the conventional historical cost basis. Translating historical cost-based inventory at the current rate is a compromise which produces approximate comparability of foreign and domestic inventory measures (in normal exchange environments) and accurately represents the economic impact of exchange rate fluctuations on foreign inventory. This is the method used in four of the five translation alternatives to be examined later. There is some evidence that this method is used internally by the managers of multinational corporations in evaluating exposure to exchange rate risk.[28]

Inventory measured at last in, first out (LIFO) deserves special consideration. As long as old LIFO layers are not eroded, the cost of goods sold measured at LIFO approximates replacement cost. Translation of replacement cost, a current cost, at the current rate produces an accounting measure of foreign cost of goods sold comparable to domestic cost of goods sold. LIFO inventory itself is measured at historical cost. In a firm of constant output and a period of unchanging prices, the vintage of this inventory is the time of LIFO adoption. In a firm with modestly rising physical output (not more than a few percent per year) and in a period of rising prices, the average age of inventory will normally be several years or more. This is the typical case for firms based in the United States, and it is the one in which purchasing power parity is expected to hold.[29] LIFO inventory itself is thus *not* normally subject to exchange rate risk, and comparability requires the translation of LIFO inventory of this vintage at historical rates.

Translation of the cost of goods sold at the current rate and LIFO inventory at historical rates is possible but creates complexities. It requires recognition of a translation gain or loss that results, in effect, from reclassification of inventory to goods sold. The difference between translation of LIFO inventory at the current rate and at historical rates is likely to be large, perhaps exceeding a factor of two. The difference

[28] R. Rodriguez, *Foreign Exchange Management in U.S. Multinationals* (Lexington, Mass.: Lexington Books, 1980).

[29] Over the past twenty years, real economic growth in the United States has averaged about 3 per cent per year, while the general price level has approximately tripled.

between translating cost of goods sold at historical rates and at the current rate is likely to be smaller, but it is unlikely to be negligible.[30]

To place the discussion of inventory into perspective, consider that the difference between translation of inventory and cost of goods sold at historical rates and at the current rate is, except in the case of LIFO inventory, typically on the order of a few percent. Thus, a few percent difference in the measurement of a single asset category is expected; this difference is of limited significance on the balance sheet, but income is typically only a few percent of the cost of goods sold. Thus, the effect of inventory translation method on income should be quite significant.[31]

Plant

Plant is conventionally measured at unadjusted historical cost. Depreciation is conventionally a cost allocation procedure, allocating the historical cost of plant to the periods benefitted. The lifetime of plant is long compared to the time required for exchange rates to settle into the equilibrium dictated by purchasing power parity. The requirement of comparability applied to these facts strongly suggests the use of historical rates for the translation of plant and of depreciation expense.

The use of historical rates ensures that uniform depreciation measured in the foreign currency will yield uniform depreciation measured in the domestic currency. If economic conditions, except for inflation, are similar in the two countries, the book value of foreign plant bears the same relationship to its realizable value (and present value, to the extent that this is measurable), as does the carrying value of domestic plant.

Monetary Assets

In the last section, the economic value of long-term debt was mentioned as either its market value or, if this is not readily determinable, the value of future cash flows discounted to the present at the market rate

[30] Currency fluctuations in the floating rate period have approximated 2 percent per month, according to R. Dukes, *An Empirical Investigation of the Effects of SFAS 8 on Security Return Behavior* (Stamford, Conn.: FASB, 1978), and Levich, *The Money Market*. Thus, inventory with a turnover time of ninety days would be translated at amounts that differed by several percent between the two methods. The difference is about the same as the error resulting from failure to use present value techniques in measuring current assets.

[31] The empirical effect of inventory translation method on income has been examined by one of the authors and is reported elsewhere. See J. Nance, "Consequences of Foreign Currency Translation Methods: An Industry Comparison," *Proceedings of the Midwest Regional Meeting of the American Accounting Association* (Ames, Iowa: Iowa State University, 1982).

of interest. If the accounting measure of long-term debt were this value, current rate translation would be appropriate.

Debt is not so measured, however. It is instead measured at cost or, equivalently, as the present value of future cash flows discounted at the interest rate in effect at the time of the debt-creating transaction. Both the economic value and the accounting measure of long-term debt are expressed as the present values of future cash flows. The only difference between them is the discount rate used. The requirement of comparability is satisfied by finding a translation method which produces a translated measure of debt that is the present value, in the domestic currency, of future cash flows discounted at the domestic currency rate in effect at the time of the original transaction.

A translation method which provides comparability is easily found using the interest rate parity principle. At the time of the transaction creating long-term debt denominated in F currency, an interest rate differential exists between borrowings in F and in D currencies. (This differential should be relatively well defined by management's investigation prior to the borrowing.) Set the expected annual change in the exchange rate equal to this interest rate differential. Compute the present value of future F cash flows in D currency using this expected exchange rate and the discount rate appropriate for debt of the same risk class denominated in D. The resulting D currency measure of F currency denominated debt is comparable to debt denominated in D currency.[32]

At the time of the original transaction, the measure just described is equivalent to translation of debt at the current rate. At subsequent measurement dates, the measure of debt depends on assumptions regarding the domestic discount rate and the expected future exchange rate (or, equivalently, the interest rate differential).

To achieve comparability with the conventional accounting model for domestically denominated debt, the domestic discount rate must be held equal to the rate at the time of the debt-creating transaction, regardless of market conditions at the time of measurement. The requirement of comparability, however, does not provide a basis for choosing between the market interest rate differential at the time of measurement and the interest rate differential at the time of the original transaction.

[32] Even if interest rate parity is not assumed to hold, the fact that management chose to borrow in F rather than D implies that this accounting measure is a conservative estimate of the economic value of the debt, if the usual assumptions of rational, profit-maximizing behavior by management are valid, and if the possible existence of a risk premium associated with borrowing in F may be ignored.

Measurement of debt using the interest rate differential at the time of the debt-creating transaction is equivalent to current rate translation. The measure of debt changes as the exchange rate changes. The change has two components. One component results from the change in the exchange rate expected at the time of the original transaction. This component, determined by the interest rate differential, is not in economic substance a translation gain or loss but is an adjustment to interest expense. Comparability with financial statements containing domestically denominated debt requires that this *expected* component of change in the measure of debt be included in interest expense for the period. The second component of change that results from the unexpected change in the exchange rate has no counterpart in domestically denominated debt. It is an economic translation gain or loss. Representational faithfulness requires its recognition as such.[33]

Measurement of debt using the interest rate differential observed at the time of measurement more closely approximates the economic value of debt at the time of measurement. This measure differs from economic value only through the use of the domestic discount rate at the time of the original transaction rather than the market rate at the time of measurement. The change in the measured amount of debt may be resolved into *three* components. The change that results from the *expected* change in the exchange rate is a component of interest expense. The change that results from the *unexpected, past* change in the exchange rate has no counterpart in domestically denominated debt, and is a translation gain or loss. The change that results from revision of expectations concerning *future* exchange rates (acting through changes in the observed interest rate differential) is also a translation gain or loss.[34]

[33] At a more fundamental economic level, it may be argued that a problem of comparability is associated with the recognition in income of this exchange gain or loss. The economic causes of a departure of the exchange rate from its expected behavior are analogous to the economic causes of changes in the domestic interest rate. (For example, if the real cost of capital is realtively constant, both may be regarded as arising from changes in inflation rates.) Conventional accounting practice does not recognize the latter, so perhaps it should not recognize the former. The authors do not at present regard this argument as sufficiently convincing, but perhaps they are betraying their bias for recognition of both effects.

[34] Since both the second and the third components of change in the measured amount of debt are exchange gains or losses, it is legitimate to inquire whether they should be lumped together. There is a difference. If the movement of the exchange rate may be described as a drifting random walk, there is no expectation of a reversal in the exchange rate back to its value at the time of the original transaction. In this sense, the exchange gain or loss that results from the past change in the exchange rate from expectations has been realized, while that which results from expected future changes has not.

To the authors the two methods for translation of noncurrent debt just described cannot be clearly distinguished using the two criteria applied in this article. The first method is simple. Except for distinguishing expected from unexpected changes in the exchange rate, which requires measurement of the interest rate differential at the time of the original transaction, it is merely translation at the current rate. The second method is more representation faithful — it more nearly approximates economic valuation. It is not economic valuation, however, because of the assumption of an unchanging domestic discount rate.

In this section, the appropriate translation of accounting measures of current assets, inventory, plant, and monetary assets has been examined using the criteria of comparability and representational faithfulness. Existing and proposed translation methods on the basis of the conclusions developed in this section will now be evaluated.

EVALUATION OF TRANSLATION METHODS

Of the translation methods seriously proposed or implemented in the past decade, five appear to be worthy of careful examination. The current rate method is undeniably useful for the translation of financial statements based on current values or price-level adjusted accounting measures. The method of SFAS 52 is the required method. The current/noncurrent method was recommended by Accounting Research Bulletin 51, and was used fairly extensively until the promulgation of SFAS 8. The monetary/nonmonetary method was recommended by Accounting Research Study 12 and is, in substance (except for a few refinements), the method of SFAS 8. The monetary/nonmonetary method with inventory treated, in effect, as a monetary asset has been advocated by some recent writers and was used by many companies before SFAS 8 went into effect.

The methods to be evaluated are based on translation rates determined from currency exchange markets. Each method classifies the accounts to be translated in one of two categories: a "current rate" account or an "historical rates" account.

Current rate accounts on the balance sheet are translated at the rate in effect at the balance sheeet date. Exchange rate fluctuations

Admittedly, the idea of realization based on observed market behavior described in the last paragraph is different from the concept of realization conventionally applied. It regards, for example, changes in the market value of securities as realized, provided the securities are traded in markets which have been empirically confirmed to be weakly efficient. This sort of enlargement of the realization principle may be an important practical method of moving accounting measures closer to economic values without the sacrifice in objectivity entailed by the abandonment of market measures.

therefore cause fluctuations in translated current rate account balances. A company with a net position in current rate accounts is subject to risk, in the accounting sense, arising from exchange rate fluctuations. The relation between accounting risk and economic risk depends on the translation rules.

Translation at historical rates requires two steps. First, each account is divided into individual transactions, and each transaction is translated at the market rate in effect at a time appropriate to that transaction. In most cases, the time appropriate to an individual transaction is the transaction time itself. In some cases, such as the translation of depreciation expense and accumulated depreciation, the appropriate time is the earlier time of the underlying exchange transaction. Second, the translation rate for the account is computed as the value-weighted average of individual transaction translation rates. Exchange rate fluctuations have no effect on account balances translated at historical rates. Such balances are not subject, in the accounting sense, to exchange rate risk.

The Current/Noncurrent (CN) Method

Current assets and current liabilities are translated at the current rate. Noncurrent assets and noncurrent liabilities are translated at historical rates. The intent of this method is to remove long-term asset and liability measures from exposure to changes resulting from fluctuations in the exchange rate.

The CN method treats current assets in a manner that produces approximate translated economic values and provides comparability with domestic operations. The treatment of plant provides comparability with domestic operations. It distorts economic values in a manner familiar to users of domestic statements. That is, it departs from representational faithfulness in the same way and for the same reasons as does the conventional accounting model applied to domestic plant.

The distinguishing feature of the CN method is its most serious defect. The treatment of long-term debt is unsatisfactory. The economic consequences of both expected and unexpected changes in the exchange rate are concealed by the translation of long-term debt at historical rates. These consequences appear as a sudden shock when debt is reclassified as current. The timing of the appearance of this reclassification gain or loss in the accounting reports is unrelated to the timing of the economic events which were its cause. In the present floating rate exchange environment, reclassification may easily change the measure of a monetary asset or liability by a factor of two — even if only major trading currencies are involved.

The Monetary/Nonmonetary (MN) Method

Monetary assets and liabilities are translated at the current rate, and nonmonetary assets and liabilities are translated at historical rates. Assets and liabilities are classified as monetary or nonmonetary on the same basis as when adjusting for the effects of general price-level changes. This method closely approximates the temporal method of SFAS 8 when applied to conventional cost-based financial statements.

The MN method meets the evaluation criteria used here better than does the CN method. There is no difference in treatment of current assets other than of inventory and of plant. Treatment of inventory is reasonable, but not totally satisfactory if LIFO costing is used; it is unsatisfactory otherwise. Treatment of long-term debt is better than that of the CN method. The major difference between MN method treatment and the preferred treatment is that the effect of a change in the exchange rate is recognized as a transaction gain or loss even if the rate change was fully anticipated at the time of the transaction which created the debt.

Modified Monetary/Nonmonetary (MI) Method

The translation rules are the same as for the monetary/nonmonetary method except that inventory is translated at the current rate. Thus, except for inventory, the discussion of the MN method applies.

Inventory translation at the current rate is, except for inventory carried at LIFO cost, in agreement with the preferred method. Thus, the MI method is preferrable to the MN method for other than LIFO inventory.

The Current Rate (CR) Method

The current rate method, as defined here, translates all accounts at the current rate and includes the translation gain or loss in income. It does not fare well in this evaluation, although it treats current assets other than inventory in the same manner as the other methods, monetary assets in the same way as the MN and MI methods, and inventory in the same way as the CN and MI methods.

The problem asset category for the CR method is plant. By translating historical cost measures of plant and of depreciation expense at the current rate, it produces measures in the domestic currency that are neither economically meaningful nor comparable to the accounting measures of plant in the domestic currency. This is the worst of both worlds. Fluctuations in the exchange rate cause depreciation expense, viewed from D, to be different in different intervals, even if straight-line depreciation is used. If the foreign and domestic economic environ-

ments are similar, except for the rate of inflation, the ratios of translated historical cost to replacement cost and realizable value will be different for foreign and domestic plants.

The SFAS 52 (CS) Method

The CS method is the current rate method as defined previously, except that translation gains and losses are not included in income. They are taken directly to stockholders' equity in a valuation allowance. Criticism of the CR method applies with equal validity to the CS method.

The methods differ in reporting format, not in information content. The CS method trades a volatile and difficult-to-interpret income component, the gain on net assets, for a volatile valuation account in stockholders' equity.[35]

This valuation account appears similar to the valuation account already required for certain marketable securities, but the apparent similarity is illusory. The valuation account for marketable securities has a direct and easily understood economic meaning — it is a change in market value. The valuation account for translation gains has no such property.

CONCLUSIONS

This article has used the FASB's desired qualitative characteristics of accounting information to make a rational choice from among proposed methods for consolidating financial statements denominated in a foreign currency. A group of users with tastes within a prescribed realm of similarity has implicitly been assumed. Balancing faithfulness to economic values and comparability with domestic accounting measures, it was concluded that the MI method, perhaps modified to MN for companies using LIFO inventory, is a relatively satisfactory method for the translation of conventional historical cost-based financial statements. The only modification of the MI method indicated by the conclusions in this article is a change in the classification of the component of the translation gain on monetary assets arising from expected changes in the exchange rate. Classification of this component as an interest revenue would make foreign and domestically denominated interest comparable and would make a translation gain directly suggest wise (or lucky) management decisions.

[35] In J. Nance and R. Roemmich, "Financial Statement Impact of Foreign Currency Translation Alternatives" (1982), the authors show that the accumulated translating gain of a typical foreign subsidiary becomes a substantial fraction of total equity after a few years in the current floating rate environment. Moreover, there is much variability in the size of this fraction among companies in the same exchange environment.

On the basis of the evaluation, the CR, CS, and CN methods have serious defects. Since the MN method is essentially the method required by SFAS 8, the adoption of the CS method in SFAS 52 was a move from a preferred method to an inferior one.

Two serious barriers must be surmounted before presenting the authors' conclusions of this article as a policy recommendation. That qualitative evaluation of methods on the basis of fidelity to economic valuation and comparability with domestic accounting reports cannot directly address the magnitudes of differences between methods must be acknowledged. An inferior method, evaluated on a qualitative basis, would produce superior translated financial statements because it would produce better results for the accounts that mattered most and inferior results on the accounts that mattered least. The actual results of translation methods when applied to the financial statements of existing companies must be evaluated. This the authors have done elsewhere.[36] The authors generally support the conclusions presented here, in that the accounts handled badly by the CR, CS, and CN methods tend to impact significantly the balance sheets and income statements of the companies studied.

The second barrier is more fundamental. Issues related to the economic costs of providing information and the economic consequences of the reporting method have not been addressed. Two major problems stand in the way of incorporating these economic issues into evaluation criteria. Very little information exists of the costs (actual and opportunity) associated with different translation methods. Selection from among different translation methods involves complex issues of social choice about which there has been no consensus resolution.[37]

Social choice issues arise because the parties interested in the information content of financial statements do not have the prescribed realm of similarity of interests implied by the use of qualitative characteristics for standard evaluation, yet the Structure Committee of the Financial Accounting Foundation suggested the use of a conceptual framework to assist in the development of financial accounting standards in a rational and consistent manner.[38] The FASB has developed a conceptual framework which includes the qualitative characteristics

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[36] Ibid.

[37] William Beaver, "What Should Be the FASB's Objectives?" *Journal of Accountancy* (August 1973): 49-56.

[38] Financial Accounting Foundation, Report of the Structure Committee, *The Structure of Establishing Financial Accounting Standards* (Stamford, Conn.: FAF, 1977), pp. 30-31.

used in this article to evaluate translation methods. The FASB has also promulgated SFAS 52. Although failure to resolve the economic issues prevents conversion of the conclusions of the author to policy recommendations, the conclusions bear directly on the consistency of the FASB in its use of the conceptual framework in standard setting.

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Accounting as History

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INTRODUCTION

The purpose of this article is to contribute to the discussion of the epistemic justification of the study of accounting history. Baladouni's interesting article approaches accounting history in terms of disciplinary and cultural definitions of accounting.[1] The present article suggests the prior necessity of asking a more general question, the answer to which Baladouni's discussion forms a part. That question is whether accounting history *is* "history." The present article defines this problem and offers some suggestions as to how it might be analyzed.

The question posed can be divided, for discussion purposes, into two parts:

1. Are there criteria by which a study of the past must justify itself to be worthy of the name "history"?
2. If such criteria exist, how strongly do they support the claim of accounting history to scholarly attention?

The present paper represents the writer's reaction to the results of a methodological, primary, and secondary literature search.

FACTS RELEVANT TO A THEME

Few would support without major reservation the positivism pursued to the extent found in Ranke's classic observation that the historian's

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The author thanks the librarian and other staff of the Library of the Institute of Chartered Accountants in England and Wales, London, for their guidance and for access to their important holdings in the field of accounting history.

[1] Vahe Baladouni, "The Study of Accounting History," *International Journal of Accounting* (Spring 1977): 53-67.

brief is simply to discover and state "the facts themselves" (*wie es eigentlich gewesen war*).[2] Most would prefer to distinguish facts concerning the past from historical facts. Postan observes that

> whereas antiquaries collect facts historians study problems. To a true antiquary all past facts are welcome. To an historian facts are of little value unless they are causes or parts of causes, or the causes of causes, of the phenomena which he studies.[3]

The account of an event must be suggestive, must point toward generalization, if it is to be more than trivial.

Ranke's viewpoint is in contrast to that of Croce who argues that history consists essentially in seeing the past through the eyes of the present and in the light of its problems, and that the main work of the historian is not to record but to evaluate.[4] Historical facts are selected and arranged. Collingwood goes so far as to say that the historian reconstitutes facts and that the process of reconstitution governs selection and interpretation.[5] The intellectual danger lurking here is the one envisaged by Froude when he says that, if objective history is eliminated, history becomes "a child's box of letters with which we can spell any word we please."[6] Carr's appealing suggestion partakes of both approaches:

> The duty of the historian to respect his facts is not exhausted by the obligation to see that his facts are accurate. He must seek to bring into the picture all known and knowable facts relevant, in one sense or another, to the theme on which he is engaged and to the interpretation proposed.[7]

Lévy-Bruhl would even require the historian to go beyond "known and knowable" facts. Believed facts may be as or more important than facts:

> Dire qu'un fait a produit des effets, c'est dire qu'il a trouvé créance dans un milieu, étendu ou restreint C'est l'opinion établie à son sujet qui constitue son caractère historique.[8]

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[2] L. von Ranke; these remarks made in the 1830s appear in "Preface to the First Edition," *Geschichten der romanischen und germanischen Völker* (Leipzig: Werke, 1874), p. viii.

[3] M. M. Postan, "The Historical Method in Social Science," reprinted in *Fact and Relevance* (Cambridge: Cambridge University Press, 1971), p. 25.

[4] B. Croce, *La Storia Come Pensiero e Come Azione* (Bari: Laterza, 1938); translated as *History as the Story of Liberty* (Allen and Unwin, 1941), p. 19.

[5] R. G. Collingwood, *The Idea of History* (Oxford: Clarendon Press, 1946).

[6] J. A. Froude, *Short Studies on Great Subjects,* vol. 1 (London: Longmans Green, 1894), p. 21.

[7] Edward Hallett Carr, *What Is History?* (London: Macmillan, 1962), pp. 22-23.

[8] "To say that a fact has had consequences is to say that it had credibility in an environment, large or small. It is the opinion established about the fact that creates its historical nature." Henri Lévy-Bruhl, "Qu'est-ce que le fait historique?" *Revue de Synthese Historique,* vol. 42 (1926): 55.

The public conception of a fact determines whether or not it is an historical fact, according to this view.

HISTORICAL THEMES

The argument thus far, namely that historical facts are facts selected and arranged toward the analysis of a theme, does not provide a criterion for judging the importance of the theme itself. The analysis of a trivial theme is presumably not history. Therefore, a further question is how we can measure whether a theme is trivial or important. The purpose of history was understood by Carr as enabling mankind to understand the society of the past and to increase mastery over the society of the present.[9] The historian seeks themes that had significant influence of the development of society. As A. L. Rowse observes: "[History] is about human society, its story and how it has come to be what it is."[10]

Some would probably go further and argue that the true historian is charting the progress of society toward the perfection of man's estate on earth, but this view presupposes that society has a goal, such as mastery of self and environment.[11] It is not necessary to debate this particular point here. For present purposes, a more neutral view will be adopted: the importance of a theme will be assumed to be measurable in terms of its influence on the development of society, without prejudging or evaluating the sense of the development. This criterion will serve to distinguish the historian from the antiquarian "who placates his intellectual agoraphobia by shutting himself up in small and dark subjects. . . ."[12] "The microcosmic method of a scientific historian implies a recognition of the need for making his investigations relevant to the wider issues of social science."[13]

SCIENCE OR ART?

The importance of selection and interpretation implied in the earlier argument raises the question of how far history is in any sense objective — in particular, how far we study it as an art or a science. Different criteria will be required for judging its endeavors and products, depend-

[9] Carr, *What Is History?* p. 49.
[10] A. L. Rowse, *The Use of History,* 2nd ed. (London: English Universities Press, 1963), p. 13.
[11] P. Gardiner, "Philosophy of History," in *International Encyclopaedia of the Social Sciences,* 8th ed., ed. David L. Sils (New York: Collier and Macmillan, 1968), p. 428.
[12] M. M. Postan, "History and the Social Sciences," an essay in *Fact and Relevance* (Cambridge: Cambridge University Press, 1971), p. 21.
[13] Postan, "The Historical Method," p. 31.

ing on how this question is answered. Carr argues that history "cannot accommodate itself to a theory of knowledge which enforces a rigid separation of subject and object."[14] There can be objectivity of relation between fact and interpretation, however, and between past, present, and future, as in Rowse's noble conceptions: "Bound as our lives are to the tyranny of time, it is through what we know of history that we are delivered from our bonds and escape — into time."[15]

Carr, like Rowse, views the historian as rising above his or her own situation in society and in history and detecting and analyzing the causes of development.[16] Similarly, Gardiner sees the special meaning of the historian's "objectivity" in terms of a choice of events by the criterion of causal fertility.[17] The nature of any problem may establish this causal fertility, and in this sense, the historian is objective.

More generally then, is history a science or an art? A number of philosophers of history have reviewed the conventional attacks against its entitlement to be called a science.

The argument that history deals exclusively with the unique, whereas science deals with the general, is met by the response that, as noted earlier, the historian seeks revelations of the general in the particular. "What distinguishes the historian from the collector of historical facts is generalization."[18] This is not to say that the historian is invoking a natural law, as does the natural scientist in the form of inductively established, experimentally confirmed propositions. The historian interprets events using empathy which of necessity draws on the historian's personal experience, hopes, fears, and intuition.

The argument that history is unscientific because it teaches no lessons is met by invocations such as the impact of Ancient Greece on Rome and the parallels between the Russian and French revolutions. History's inability to make precise predictions is countered by the response that history makes *ceteris paribus* predictions and that a scientific prediction, like an historical one, will be belied by the intervention of an accident.[19] The objection that history is involved with questions of religion and morality (in contrast to the physical sciences) can be met[20] by the response that (1) history, like the physical sciences, is consistent with the idea of a being who created and ordered the uni-

[14] Carr, *What Is History?* p. 114.
[15] Rowse, *Use of History,* p. 24.
[16] Carr, *What Is History?* pp. 115-16.
[17] Gardiner, *"Philosophy of History,"* p. 428.
[18] G. Elton, *Cambridge Modern History,* vol. 2 (Cambridge: Cambridge University Press, 1958), p. 20.
[19] Carr, *What Is History?* p. 62.
[20] Ibid., p. 681.

verse, and (2) history attributes moral qualities but does not appraise by moral yardsticks.

A rehearsal of the analogies between history and the physical sciences and of how the methods of the latter exist in modified form in the former, however, fails to render the most creative components of historical methodology. For some of the greatest historians, "history is beyond science. . . . History is an emotional and artistic exercise aiming at the intuitive comprehension of concrete situations or whole epochs."[21] Such view brings history close to literature. Indeed, one might argue, for example, that the *schwärmerisch* spirit of emancipation and universal brotherhood which swept Europe in the wake of the French Revolution is as well rendered by Wordsworth's *Prelud*e as by many a work of formal history. Similar claims could be made for the literature of the *Strum und Drang* period in Germany, and for Balzac's novels. Perhaps too rigid a distinction has been drawn between literature and history. History might become more informative, communicative, and more pleasing if (as the best already does) it used, the creative intuition and devices of the artist. Rowse says, however:

> [History's] essence is in the concrete fact, the manifold variety of events and happenings that once took place in the real world. The historian's business is to narrate them, to recreate them. To do that he needs to be an artist. The process of historical recreation is not essentially different from that of the poet or novelist, except that his imagination must be subordinated sleeplessly to the truth. It must consent to be ruled by the evidence and never go against it. It is an austere, a searching vocation.[22]

This quotation restrains one from pushing the argument to the point that history is art. Art is concerned with the possible — indeed, with extending the bounds of the possible. The historian is ruled by the evidence.

IS ACCOUNTING HISTORY "HISTORY"?

To this point, the purpose of this article has been to distinguish history from both antiquarianism and trivial writing regarding the past, and to mention some of the problems of defining the goal and intellectual orientation of historical study. These issues form the context, the range of criteria, within which the claim of accounting history to be taken as serious historical study can be assayed.

A definition of accounting history is offered by the committee report of the American Accounting Association (AAA): "the study of the evolution in accounting thought, practices and institutions in response

[21] Postan, "History and the Social Sciences," p. 16.
[22] Rowse, *Use of History,* p. 97.

to changes in the environment and societal needs."[23] The same report substantiates the intellectuality and utilitarianism of accounting history as follows:

Intellectuality: "It illuminates the process by which accounting thought, practices and institutions develop . . . and seeks to determine the effect on the environment of changes in accounting thought, practices and institutions."

Utilitarianism: "History throws light on the origins of concepts, practices and institutions in use today yielding insight for the solution of modern accounting problems." The philosopher of history would certainly accept these claims to respectability, provided there are indeed reasonable grounds to suggest (1) that accounting has been influential, and (2) that it is likely that lessons can be learned from the study of its past.

The remainder of this article will propose that serious doubt exists under both headings and that accounting history's claim to be a subject for serious academic study is not established. The AAA report unfortunately provides little methodological guidance. Although the committee was charged to propose "objectives for research in accounting history," its report effectively comprises a list of topics, with virtually no epistemical analysis of accounting history as a field. Goldberg's short informal paper on accounting history more effectively points the right direction with its introductory recognition that history is "more than antiquarianism, because to be properly included as history there must be some discernment of pattern and some attempt at explanation of the way in which events took place."[24] Goldberg's paper, however, also includes dangerously sweeping analogies between accounting and history:

> The simple fact is of course that the facts of history are never simple. Neither is the concept of causality. And it is precisely in this connection that a study of history can help us as accountants. . . . it will point to the extreme unlikelihood of being able to predict the outcome of any proposed measures.[25]

To find this lesson in the history of accounting would be difficult, and if an analogy with general history is meant, the parallel is superficial.

INFLUENCE OF ACCOUNTING

If we accept the AAA committee's argument that part of the claim

[23] American Accounting Association, "Report of the Committee on Accounting History," *Accounting Review,* supplement to vol. 45 (1970): 53.

[24] L. Goldberg, "The Future of the Past in Accounting," *Accountant's Magazine* (October 1974): 405.

[25] Ibid., p. 408.

to intellectuality of accounting history rests on its contribution to economic and business history,[26] their "examples of historical studies which deserve attention" are disturbing.[27] They virtually entirely comprise studies of the evolution of accounting practices and procedures as such, or studies of how these practices developed *from* business conditions. In essentially no case is there a question of studying the influence exercised *by* accountancy. Parker justly acknowledges the need for more contributions like that of Sombart who considered the influence of double-entry bookkeeping on economic development.[28] It will be argued later, however, that the findings of Sombart and others to this effect are not decisive.[29] Littleton and Zimmerman point to the social contributions of accounting during its history. They characterize accounting as:

1. A technology suitable for making analytically quantitative the inherent interrelations between enterprise capital and income.
2. A means of making available data concerning enterprises' resources and productive achievements.
3. An instrument for publicizing corporate financial activities.[30]

There is no doubt that the economic information mentioned here has been influential, but it will be argued that considerable evidence exists that businessmen and others have not significantly relied on accounting records for its provision.

At first sight, Winjum's work appears to suggest that developments in accounting technology were economically influential.

> Although double-entry bookkeeping was not utilized or valued in England during the sixteenth, seventeenth, or early eighteenth centuries in the same manner as today, or as envisioned by such scholars as Sombart and Weber, this study has demonstrated that this new method for the ordering of economic data did make a substantial contribution to the economic growth and development of England during this period [1500 to 1750].[31]

Such a conclusion would indeed support the claim of accounting history

[26] Ibid., p. 406.
[27] American Accounting Association, "Report," p. 53-54.
[28] R. H. Parker, "Research Needs in Accounting History," *Accounting Historians Journal* (Fall 1977): 4-5.
[29] B. S. Yamey, "Accounting and the Rise of Capitalism: Further Notes on a Theme by Sombart," an essay in *Essays on the History of Accounting* (New York: Arno, 1978), pp. 117-36; idem, "Notes on Double-Entry Bookkeeping and Economic Progress," in *Essays on the History of Accounting*, pp. 717-23.
[30] A. C. Littleton and V. K. Zimmerman, *Accounting Theory: Continuity and Change* (Englewood Cliffs, N.J.: Prentice-Hall, 1962), p. 261.
[31] James Ole Winjum, *The Role of Accounting in the Economic Development of England* (Urbana: University of Illinois at Urbana-Champaign, 1972), p. 246.

to be taken seriously by historians. The evidence adduced in the monograph preceding the remark quoted, however, does not appear to substantiate the far-reaching conclusion. Without doubt, treatises on the ability of double entry to record economic information were available in English as early as 1543, but it appears that they were little acted upon. Indeed, despite his own conclusion quoted earlier, Winjum states:

The ability of double entry to summarize and report on the success or failure of a business enterprise for a specific period of time was not valued by these early merchants. The precise determination of enterprise income, with its associated concepts of periodicity, deferrals, and accruals, was not achieved in the English double-entry account books of 1500 to 1750.

Double-entry bookkeeping, as it was utilized in England from 1500 to 1750, did not depend on, or produce, calculations of precise periodic income. Any assumptions to the contrary and any theories based on these assumptions with respect to double entry's effect on, or contribution to, the spirit of acquisition and rationalism cannot be supported by the extant accounting records of this period.[32]

Yamey's study of double-entry–based systems used in or near the seventeenth and eighteenth centuries suggests that the measurement of assets and liabilities was not seriously sought after.[33] Even the profit and loss account seems to have been less a matter of economic measurement and decision basis than of convenient bookkeeping procedure. Personal expenses were merged with business expenses and capital items were included so that

it seems appropriate to regard the profit and loss account primarily as a clearing account the operation of which facilitated the systematic clearing of the nominal accounts, and of the ledger itself. . . . The early profit and loss account is probably best regarded as little more than a necessary component in the bookkeeping process.[34]

Within accounting, double-entry bookkeeping has been widely suggested as a major innovation in the evolution of economic calculation by numerous persons, including, some say, Sombart.[35] He argues that the concept of the entity enshrined in law, in market terms, and as an accounting concept, came together with the bourgeois capitalist's ability to calculate, plan, control, and save to foster the growth of capitalistic enterprise characterized by depersonalized property rights and pursuit

[32] Ibid., p. 242.
[33] B. S. Yamey, in *Studies in Accounting Theory,* ed. W. T. Baxter and S. Davidson (London: Sweet and Maxwell, 1962), p. 38.
[34] Ibid., pp. 33, 37.
[35] Werner Sombart, *Der Moderne Kapitalismus* (Leipzig: Durcher and Humbolt, 1919).

of profit without regard to other goals. He argues that prior to double-entry bookkeeping, there was no "capital" and that double-entry bookkeeping permits expression of the flow of capital through a business.

Most notes that Sombart does not claim to produce evidence of the practical extent or influence of double-entry bookkeeping.[36] Indeed, if one reviews all of Sombart's remarks on "the business as an accounting entity," one finds that his claims at the empirical level are modest. He recognizes that the double-entry rule alone does not suffice to complete the system.

> The circular flow of capital which double-entry bookkeeping is designed to embrace can only be shown in full when these accounts are put in place from the capital account to the transaction accounts through the profit and loss account and back into the capital account.[37]

Sombart recognizes the fictitious economic nature of a profit and loss account when derived simply from the balances of the accounts in a double-entry system, because:

> Two conditions have been disregarded which materially affect the size of the actual profit or loss:
> 1. The fact that during the accounting period, part of the overheads cannot be exactly determined;
> 2. The fact that, from the moment of their entry into the business, values may (and in most cases do) diminish....

Thus, the final trial balance is dependent upon an operation external to the bookkeeping system, namely the inventory.[38] Sombart leaves open the question of whether "the age of early capitalism ended without establishing the idea of a non-accounting inventory as a necessary element in the complete system of double-entry bookkeeping."

There appears to be no claim on Sombart's part that the double-entry system, as such, is capable or was claimed to be capable of generating relevant economic data concerning reporting entities, or that double-entry system were used to this end. He says of the seventeenth century bookkeeping theorists that

> if (they) called for the books to be closed annually, it was essentially for bookkeeping purposes; as in the case of de la Porte, it was purely a mechanistic function, or, as Schär correctly states, "an accounting trick, an equivalence of identities."[39]

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[36] Kenneth S. Most, "Sombart on Accounting History," in *The Accounting Historians Working Paper Series,* vol. 2, ed. E. H. Coffman (Richmond: Virginia Commonwealth University, 1979), p. 247.
[37] Ibid., p. 249.
[38] Ibid., p. 250.
[39] Ibid.

He later observes that there is no requirement even in the eighteenth century to ascertain values.

Sombart's praise is for double entry as a framework. "It is hard to imagine capitalism without double-entry bookkeeping: they belong together like form and content."[40] Through it, the "wealth producing sum" is isolated and separated from all natural objectives of human welfare. He also sees scope for the use of a double-entry framework for planning and control purposes:

> Through the separate treatment of the individual departments of an undertaking, every single element of success or fortune can be shown in the various accounts. It has been correctly remarked that the far-reaching planning activities of the undertaking are also assured by its bookkeeping.[41]

But the very limited claim of Sombart at the empirical level is regrettably not generally made explicit by his detractors. Sombart clearly says:

> We know nothing about [double-entry's] application in practice. We would particularly like to have information on this question: to what extent and how thoroughly did business management operate during the last centuries of the early capitalist period in conformity with the teaching and instructions of business theorists? We would only give a definitive answer to this question if we had statistical data concerning the books of account actually kept by businessmen. These we do not possess.[42]

As will be shown, data is now available which indicates the very limited financial reporting role played by accounting systems even when in double-entry form.

The importance of the double-entry system, even at the conceptual level, has been questioned by Yamey.[43] He argues that the total profit and return on capital were not important to business decisions, that the abstractions of double entry made decisions more difficult, that profit and loss accounts were rarely prepared anyway, that the entity notion did not depend on double entry and that double entry's role in allocation was unnecessary for the continuing enterprise and of little help in new ventures. Double entry helped solve routine and administrative problems — which could have been solved by non–double-entry systems anyway. At the empirical level, he considers that narrow bookkeeping purposes predominated and that the reporting of income and value was relatively unimportant.

In recent years, a wealth of early examples of financial reporting

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[40] Ibid., p. 251.
[41] Ibid., p. 252.
[42] Ibid., p. 254.
[43] Yamey, *Essays*.

has surfaced. How far do these illumine the claims concerning the usefulness and economic informativeness of accounting in history?

It is generally agreed that the purpose of accounting in the first 1500 years A.D. was not to provide data of economic significance but to control the accountability of stewards. Freear has observed that accounts were kept more for the protection of the steward ". . . than for the purpose of indicating change in net wealth."[44] Chatfield observes "no clear distinction was made between capital and revenue expenditures, the cost of the horse being recorded in much the same way as the cost of the hay it consumed. . . . Overall profit was normally of little interest."[45]

When accounting records of the seventeenth and eighteenth centuries are examined, they are found to be economically uninformative. Yamey, Edey, and Thomson reviewed a number of these records and found:

> Major omissions of assets and liabilities . . . general account was credited with appreciable sums of rents received, though no commensurate investments in land and property appeared in the ledger. . . . The balancing process it seems was mainly concerned with narrowly defined book-keeping purposes.[46]

Balancing dates were generally arbitrary as was the profit in the sense that some nominal accounts were not closed to the profit and loss account when the latter was balanced. They found several cases of carefully kept personal accounts, reflecting an interest in control or indebtedness rather than in economic financial reporting. Frequently, a general account was used for both a partnership capital account and a profit and loss account. The profit and loss account, in turn, frequently included private receipts and payments and capital, as well as revenue entries. Prepayments and accruals were generally ignored. Fixed asset accounts often contained both the asset balance and the receipts and payments from its operation. This is economic nonsense.

One might have thought that financial reporting, both to external users and for internal planning and control, would have flourished under the influence of the industrial revolution. One might have expected accountants, by whatever name, to respond to demands from outside financiers for economically meaningful entity reports and to managers wishing to plan and control the operations of large-scale, complex organizations. The evidence for this late period to modern

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[44] J. Freear, "Historical Background to Accounting" in *Current Issues in Accounting,* ed. B. Carsberg and T. Hope (Oxford: Philip Allan, 1977), p. 4.

[45] M. Chatfield, *History of Accounting Thought* (Hinsdale, Ill.: Dryden, 1974), p. 25.

[46] B. S. Yamey, H. C. Edey, and H. W. Thomson, *Accounting in England and Scotland: 1543-1800* (London: Sweet and Maxwell, 1963), pp. 183, 186.

times, however, indicates that financial reporting remained surprisingly primitive and sometimes dangerously misleading in terms of economic meaning.

Until the last quarter of the nineteenth century, control and decision information appears to have been provided by the double-entry financial accountancy system[47] along lines similar to that of pre-industrial Britain. Even when accounting systems become more sophisticated, there is evidence that accounting information had little influence on business decisions. Pollard suggests that accounting was used only minimally to guide business decisions in the industrial revolution and that where it was used, its guidance was unreliable.[48] He argues that accounting technology was unnecessary at a time when selling prices were far above costs and when only small withdrawals occurred, and so on. Ironically, he suggests that it was precisely when firms departed from routine in order to innovate that accounting was neglected until a new routine had been established.

The legislation and judgments reflect the primitive state of financial reporting throughout the nineteenth century. The Joint Stock Companies Act of 1844, allowing industrial enterprises generally to achieve corporate status by registration with the Board of Trade, required books to be balanced and a balance sheet to be prepared and audited. Neither the basis of asset valuation nor the form for the balance sheet was prescribed. No profit and loss account was required — this requirement was not to come until 1929! Companies could and did simply file identical balance sheets year after year.[49] The Joint Stock Companies Act of 1856 even removed these legal requirements and substituted a voluntary set of regulations. The 1862 act provided that dividends could only be paid out of profits, but despite some details as to what could and could not be charged in arriving at profit, "nothing was set down about the basis of asset valuation on which the profit figure depended."[50] The 1879 companies act made an annual audit compulsory for banks registered with limited liability. The auditors had to report whether the balance sheet was "full and fair." The 1900 companies act made an annual audit obligatory for all registered companies. The 1907 companies act, consolidated in 1908, distinguished for the first time between public and private companies and required

[47] Freear, "Historical Background," p. 10.
[48] S. Pollard, *The Genesis of Modern Management* (London: Edward Arnold, 1965), chap. 6.
[49] Freear, "Historical Background," p. 19.
[50] Ibid., p. 16.

the former to file an annual balance sheet containing "a summary of its capital, its liabilities, and its assets, giving such particulars as will disclose the general nature of such liabilities and assets, and how the values of the fixed assets have been arrived at." The 1929 companies act required the publication of profit and loss accounts. The 1948 companies act made group accounts compulsory, distinguished between reserves and provisions and required auditors to report whether accounts are "true and fair."

The case studies edited by Lee and Parker add to this picture of nineteenth century financial reporting having very limited economic significance. N. K. Hill studied the accounting system and financial reports of the Imperial Continental Gas Association from 1824 to 1900.[51] Lee observes that:

> [Hill's study] confirms many of the features of nineteenth century company accounting — the lack of provision for depreciation and contingencies; the publication of a balance sheet without a profit statement; the lack of a professional audit; and shareholders not receiving copies of the audited balance sheet.[52]

Lee's own study of DCL from 1881 to 1944 reveals, as he says,

> the relative poverty of the information provided to DCL shareholders throughout much of the period covered — for example the early lack of balance sheet classification; the meaningless profit statement intended only to justify dividend proposals; the lack of notes supporting financial statement data; the haphazard accounting for fixed assets and their depreciation; and particularly, lack of information concerning investments in other companies.[53]

Similarly, Hodgkins' study of Unilever accounts between 1894 and 1915 discloses "lack of profit information of any consequence."

The nineteenth century saw the genesis and development of the professional accounting bodies, but throughout their history, they have had little influence on the rationality and economic significance of financial reporting. They were not involved in the formulation of legislation. They ignored costing and were preoccupied with the interests of practicing public accountants. Stacy has associated this technical backwardness with a more general phenomenon: "During the closing years of the nineteenth century it was widely held that Great Britain was falling behind her industrial competitors abroad and that their

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[51] N. K. Hill, "Accountancy Developments in a Public Utility Company in the Nineteenth Century," *The Evolutions of Corporate Financial Reporting*, ed. T. A. Lee and R. H. Parker (Sunbury: Nelson, 1979), pp. 6-14.
[52] Ibid., p. 3.
[53] Ibid., p. 4.

advantage was largely due to superior technical education."[54] Elsewhere, he refers to the complacency on industry's part.

> It appears that the skill required from accountants has been forthcoming and readily placed at the disposal of business, but already before World War I the lack of appreciation generally by the captains of industry of much that accounting could offer — particularly costing — can be described as deplorable if compared with contemporary practice in other lands.[55]

This primitive condition continued through and well beyond World War I. Dr. Marriner points to the major defects in the accounting procedures of the Ministry of Munitions in the period 1915 to 1919.[56] Elementary forms of internal control, such as double-entry bookkeeping, were lacking. Capital expenditure, advances, and consignments were uncontrolled to a degree that investigators in 1918 warned the minister that "the first Balance Sheet will show upwards of £200 mn. of money advanced but unaccounted for" and a further "very large figure, probably well over £50mn. which is represented by unsettled items such as procrastination in fixing prices and disputes with contractors."[57] That this situation is more than anecdotal and reflects the lack of available skills at the time is reflected in contemporary statements concerning the difficulty of finding and recruiting skilled accountants for posts at the ministry. Despite the improvements in the private sector after the war, partly through the influence of the ministry's experience, "standards remained primitive. The Balfour Committee complained in 1929 of the lack of consistent and scientific practice among many firms in respect of costing accounts."[58]

Stacy credits the professional bodies with furthering discipline and integrity, but berates their unwillingness to innovate: "They were admirable to proffer advice on tasks submitted for their consideration but there was little room left for originality."[59] He points to the "atrophy of the spirit of innovation."

The implication of the foregoing is that through to modern times, both internal and external financial reporting has offered little to its users in the way of meaningful, reliable economic information for de-

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[54] N. A. H. Stacey, *English Accountancy 1800-1954: A Study in Social and Economic History* (London: Gee, 1954), p. 65.
[55] Ibid., p. 69.
[56] S. Marriner, "The Ministry of Munitions 1915-1919 and Government Accounting Procedures," *Accounting and Business Research,* no. 37 A (1980): 130-42.
[57] Ibid., p. 138.
[58] Ibid., p. 139.
[59] Stacey, *English Accounting,* pp. 110-11.

cision purposes. There is evidence that this has been well recognized by discerning potential users of financial reports.

In a famous lecture in 1921, Sir Josiah Stamp stated:

> Scientific accountancy has now been developing for some fifty years, but I cannot trace that it has made a single substantial contribution to economic science over its own field of analysis . . . . None of us has the slightest knowledge as to how the differentials of profit for profitable concerns, as compared with marginal concerns, are made up and classified and to which element of advantage most profits are due.[60]

Morgenstern was aware of the "meaningless statements" produced when balance sheets are aggregated and of the arithmetic and conceptual heterogeneity within the balance sheets, profit and loss accounts, and operating statements. He recognizes that results among firms are incomparable, and that the distortions in times of changing price levels within and among firms are massive. "Such figures give a very inadequate picture of physical or economic reality. . . . The advisability of new ventures is judged by forming ideas about expected profits — which however are determined by the same questionable procedures discussed above." Accountants must learn to produce "substantially new ideas of constructing balance sheets composed of conceptually homogeneous figures."[61]

Dr. Marriner's later paper[62] further alerts business historians to inaccuracies, omissions, and inconsistencies in nineteenth and twentieth century company financial statements. These defects beset attempts to gain insight from the accounts into business operations and transactions. She refers to the lack of conventions which leads to wide variations of practice between firms which in turn compound the unreliability of data and comparisons.[63] Legislation was inconsistent among industries and vague as to notions of profit and capital maintenance, albeit paying lip service to these concepts. The result was financial reporting which was incomplete, arbitrary, and subject to manipulation — a situation which sounds "a clear warning to business historians that they should on no account regard either the declared profits of a company or its dividend distribution as a guide to the company's real net earnings."[64] The scope for manipulation and production of virtually any profit figure desired by adjustments of depreciation and secret

[60] Sir Josiah Stamp, quoted in Stacy, *English Accounting,* p. 111.

[61] Oskar Morgenstern, *On the Accuracy of Economic Observation* (Princeton: Princeton University Press, 1963), chap. 4, esp. p. 85.

[62] S. Marriner, "Company Financial Statements as Source Material for Business Historians," *Business History* (July 1980): 203-35.

[63] Ibid., p. 222.

[64] Ibid., p. 209.

reserves, and for hiding information about the affairs of subsidiary companies, is explained and illustrated by Dr. Marriner. One might, indeed, as she says, "be tempted to conclude that [accounts] contain no useful information at all."[65]

The status of accounting history as a field of study would be in still more doubt if support were found for a hypothesis mentioned by Parker that

> accounting practice only changes as a result of very strong external pressures such as a stock market crash, a major scandal or a major inflation, and that even then its capacity to change is limited by lack of available theories (or by the unsuitability of available theories).[66]

It can be argued that at the present time, accountants lag behind the environmental developments. Glautier and Underdown quote a study which concluded

> that the accountant is being replaced as a bookkeeper by the computer and as a problem solver by the operations research man, and that he is also losing his exclusiveness as a purveyor of management information . . . . by 1980 accountants will be providing a much smaller percentage of the total information needs of society.[67]

This sort of observation brings into question the intellectual case for studying even the contemporary history of accounting. One is reminded of Chambers' description of the adoption of the cost doctrine as evidence of the tendency of systems to seek a function they *can* perform when the performance of an original function imposes stresses beyond their capacity.[68]

The intellectual status of the history of accounting technology again comes into question when one notes the traditional standing and background of the bookkeeper and accountant:

> As the swills of the bookkeeper and accountant were then acquired by practice and as the entrants to the profession did not commonly undertake educational programs at a high tertiary level, there was no opportunity for constructive comparison of the art of accounting with other arts and sciences.[69]

The status of the profession has admittedly grown rapidly since the late nineteenth century, but this very status has been quoted by some

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[65] Ibid., p. 203.

[66] R. H. Parker, "Research Needs in Accounting History," *Accounting Historians Journal* (Fall 1977): 5. This includes an annotated bibliography of important works and journals in accounting history.

[67] M. W. E. Glautier and B. Underdown, *Accounting in a Changing Environment* (London: Pitman, 1974), p. 24.

[68] Raymond J. Chambers, *Accounting, Evaluation and Economic Behavior* (Englewood Cliffs, N.J.: Prentice-Hall, 1966), p. 353.

[69] Ibid., p. 345.

as a reason for the profession's pretension, complacency, and resistance to innovation out of fear of losing status to bodies with more relevant skills. Perhaps Nelson's cultural explanation is apposite:

> A science of accounting has a function in a society where science has a status; it helps satisfy the needs of many individuals; it is an incentive to important useful work and it helps to develop individual responsibility to society.[70]

The danger of respectability based on status is, however, that "status systems . . . limit adaptability in an adaptive society."[71] Does this suggest that the achievement of the accounting historian will at best be to demonstrate how accounting technology's development has *inhibited* social and economic development? Baladouni's response would be of interest given his view that

> as we learn about the history of our field, we will learn that we are the heirs of western culture playing a vital and necessary role in its economic advance. We shall learn . . . the part accounting plays in political and social institutions.[72]

THE LESSONS OF THE PAST

Only in the present century have accountants begun, to any extent, to think seriously about their intellectual academic status. As Glautier and Underdown observe:

> For most of its history as a subject accounting has been regarded as a skill in processing data and extracting information for the use of businessmen . . . . its practitioners have been more concerned with solving practical problems than with abstract generalizations.[73]

Some may argue, however, that the standing of a subject's history does not depend on whether its participants were conscious of the theoretical importance of what they were doing. If accounting at the present time has serious theoretical content, perhaps this new self-consciousness can be brought to bear on the subject's history, thus making it worthy of academic study. Furthermore, it may be that the study of accounting history may contribute to modern theoretical investigation. Therefore, it is finally necessary to ask whether the current state of thought in accounting theory suggests any intellectually rewarding avenues in the field of accounting history. In 1977, a committee of the American Accounting Association was invited to examine to

[70] Edward G. Nelson, "Science and Accounting," *Accounting Review* (October 1949): 357.
[71] Glautier and Underdown, *Accounting*, p. 25.
[72] Vahe Baladouni, "The Study of Accounting History," *Working Paper No. 19* (Atlanta, Georgia: Academy of Accounting Historians, 1975), p. 2.
[73] Glautier and Underdown, *Accounting*, p. 25.

what extent existing accounting theories provide a basis for determining the content of external financial reports and resolving accounting controversies. Their findings indicate competing paradigms within accounting thought and the lack of a settled underlying foundation. Agreement exists only on the very general level that "the central purpose of financial accounting is the systematic provision of economic data about reporting entities."[74]

The committee distinguishes three competing paradigms characterized by the "classical," "decision usefulness," and "information economics" schools. The classical school is split between (1) the normative-deductive school which generally concludes that income measured using a single valuation base would ideally meet the needs of all users, and (2) the inductive school which attempts to rationalize and sometimes justify major elements of extant accounting practice.

The orientation of the decision usefulness school is epitomized in the AAA's 1966 definition of accounting as "the process of identifying, measuring, and communicating economic information to permit informed judgments and decisions by the users of the information."[75] The 1977 AAA committee's report distinguishes, within this area, authorities who emphasize the decision models from those who emphasize the decision makers. In the former case, accountants become involved in the evaluation, refinement, and construction of decision models, and then educate the deceivers in the use of the models. When the stress is on decision makers, a distinction is drawn between writers who emphasize individual user behavior and those who conduct aggregate market-level research. Individual behavior is the concern of behavioral accounting research (BAR) which attempts to understand, explain, and predict aspects of human behavior relevant to accounting problems. The committee remarked that BAR has been primarily concerned with studying the techniques of data collection and analysis and that there has been little attempt to develop general theoretical formulations of problems or of hypotheses to be tested.[76] The studies attempt to investigate human behavior in an accounting setting but without a theoretical perspective. At the aggregate level, the relation between accounting variables and market behavior tends to be examined.

Finally, the information economics approach regards information as a conventional economic commodity, the acquisition of which con-

[74] American Accounting Association, *Statement on Accounting Theory and Theory Acceptance* (Sarasota, Fla.: AAA, 1977), p. 1.

[75] American Accounting Association, *A Statement of Basic Accounting Theory* (Sarasota, Fla.: AAA, 1966), p. 1.

[76] AAA, *Accounting Theory and Acceptance,* p. 17.

stitutes a problem of economic choice. Questions of maximizing the individual's subjective utility and of intervention and regulation in the multi-individual case are discussed. The work so far has reached the stage of isolating general relationships and the effects of alternative scenarios and not of offering answers to existing policy issues.

Can any or all of the competing paradigms provide a context within which the history of accounting is worthy of serious study? Alternatively, can the study of accounting history deepen our understanding of any of the paradigms or demonstrate the superiority of any one or combination of them? The answer to both questions must be negative, simply because past accounting practice has been both primitive and ill-documented in terms of each of the three paradigms. Illumination of each of them is very substantially more likely to result from contemporary theoretical analysis and from the analysis of contemporary or recent data than from analysis of the older material, such as is usually discovered and studied by accounting historians.

Accounting as practiced and as expressed in accounting records appears to have failed. A business historian with whom the writer has been in correspondence has stated, "accounting is vital to a market system precisely because it is the coding (language almost) of market arrangements; [the plan maker's] analysis, when set down, is accountancy." The argument in the present article suggests that the expression given to the plan maker's thoughts and to the results of his or her actions is incoherent, misleading, or empty of meaning — whether we examine the narrow products of what was mere bookkeeping until the industrial revolution, or the expressions of so-called "income" and "value" during and after the industrial revolution.

Elsewhere the same correspondent says:

> It is precisely in order to explain how market phenomenon affect individual decisions that we require the interpretation of experience on a consistent basis and its setting down in ordered fashion for reformulating plans and transmissions of information. This is the accounting function.

The argument in this article is that the accounting tradition in its early stages was limited to a bookkeeping function and, as such, did not interpret experience in any sense. In its later form, its methodology resulted in its being inconsistent and disorderly in what it recorded, especially as far as valuation is concerned.

The correspondent says further of a set of business accounts: "the most important figures they contain are the speculative anticipations of future market profiles." No set of figures based on the accounting tradition could fulfill this role except by the most remote accident or

in totally ideal conditions such that accounting would not be required at all.

CONCLUSION

The historian seeks themes that had significant influence on the development of society. The method is microcosmic: seeing the general in the particular. He analyzes facts within themes in terms of their causal fertility.

There is considerable evidence that it is correct to regard accounting "history" as a series of disconnected episodes rather than as a coherent development. Furthermore, there are grounds for arguing that the development of accounting was irrelevant to, lagged behind, or even retarded social and economic progress. Finally, there is the fact that accounting practice in the past lacked (and still appears to lack) any conscious or unconscious scientific basis. Is not such material the food of antiquarians rather than of historians?

Accounting Systems in Developing Nations: The Nigerian Experience

LAL C. JAGETIA and EVARISTUS C. NWADIKE*

Although the basic principles of accounting may be quite similar in all nations, the accounting systems among nations often vary, as they do among different industries. Such diversity of accounting systems can be attributed to the differences in the level(s) of economic development, social climate, and, to a great extent, the degree of accounting sophistication of financial information users in the various countries and industries.[1] Furthermore, and equally significant, analyses of accounting systems among nations indicate that no two accounting and business environments are quite the same. Each national accounting and business environment is different and may require an accounting system with a different approach from that used in other countries.

Given this viewpoint and approach to analyzing the accounting systems of different countries and different business environments, an ideal goal for the accounting bodies of emerging nations would be to adopt those aspects of generally accepted accounting principles and techniques applicable to their particular environment. Ironically, most developing nations have chosen to engage in the erroneous and often regrettable practice of "importing" accounting systems from developed nations.[2] Such imported accounting systems have been indiscriminately

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[1] Frederick D. S. Choi and Gerhard G. Mueller, *An Introduction to Multinational Accounting* (Englewood Cliffs, N.J.: Prentice-Hall, 1978), pp. 23-28.
[2] Adolf J. H. Enthoven, *Accountancy and Economic Development Policy* (New York: North-Holland, 1973), pp. 276-86.

adopted in some developing nations, such as Nigeria, without proper modification to the needs of the nation's specific accounting and business environment, a practice which has sometimes led to rather chaotic practices.[3] This paper discusses the current accounting system in Nigeria and offers suggestions to improve it.

THE CURRENT ACCOUNTING SYSTEM AND PROCEDURES IN NIGERIA

The Nigerian accounting system closely parallels and follows the general philosophical approach of British (and to a very limited extent, U.S.) accounting and auditing practices. Such an accounting system, as adopted by the Nigerian body of professional accountants without determining modifications, relies heavily upon "private sector" accounting practices and concepts. This accounting system includes the double-entry method of reporting the balance sheet, namely that all assets must equal all liabilities and owner's equity for the basic accounting equation to hold. It also includes another conventional business financial statement — the profit and loss account. The present Nigerian accounting system as adapted from the British is not limited to these two general-purpose statements. It also includes the following systems, to name a few: financial and operating statements, ledgers, journals, and other source documents, most of which are generated through sales and cash collecting; purchase and payment; timekeeping and payroll; and product and cost reports.

All companies affected by the Nigerian Companies Decree are required to keep proper books of account, showing receipts and expenditures, sales and purchases, and assets and liabilities.[4] This requirement is met by designing the accounting system from the source documents to the general journal entries and to postings in the general ledger of accounts, and from the ledger accounts to the special assignment, such as preparing the trial balance accounts and preparing the worksheets. The result of the various stages of such an accounting cycle includes the preparation and reporting of the various forms of financial statements: the balance sheet, the profit and loss account, and the statement of changes in financial position. The financial statements and reports are prepared on a monthly basis and serve as reports which management, as well as outside investors, can use to measure the performance of a particular firm and to determine its financial position. They also provide monthly and year-to-date figures. In addition, the consolidated statements of changes in financial position are reported in the event

[3] Ibid., p. 279.
[4] Ernst & Whinney, *Nigeria* (1979), p. 4.

of a merger or acquisition between a parent company and its subsidiaries (Appendices 2A and 2B). Additionally, various forms of accounts are classified as listed in the general ledger and expense ledger accounts and are subsequently arranged in the balance sheet and the profit and loss statements and, in most cases, are numbered according to a formal numeric coding system.

Under the Debits and Credits section, the possible debits and credits are entered following general practice.

The journal section of the accounting cycle contains a complete set of journals. The profit and loss account of each individual firm follows the conventional pattern of Western countries.

These are the traditional reporting methods passed to the Nigerian accounting body by its colonial master, the British. The Nigerian accounting profession has substantially retained their original forms, format, wording, and item classification without total concern as to whether the practices meet the basic accounting requirement of usefulness in Nigeria's unique accounting environment. The Nigerian accounting professional body must often deal with the perennnial question of whether these traditional statements, without necessary modification, are useful within the country's accounting environment, given the characteristics of its financial information users, most of whom are unsophisticated in interpreting accounting statements.[5]

Weaknesses in the Current Reporting Method

The problems of accounting in Nigeria and other developing countries have been well documented. Typical managerial problems include poor internal control; lack of management accounting concepts; incomplete, inaccurate and late records; closing; and unauditable systems.[6] The problems are primarily due to the critical shortage of qualified staff and the lack of good accounting systems.[7] And, as stated earlier, the Nigerian accounting profession has applied the accounting practices of the developed countries without modifying them to meet its needs. These imported accounting systems are geared to serve the needs of financial information users in advanced nations who are quite often far more advanced in accounting matters than their Nigerian counter-

[5] Merrill E. Cassell, "Economic Development Accountancy," *Management Accounting* (May 1979): 24. According to him, illiteracy in Nigeria may be a factor. Only 7.2 percent of school-age children in Nigeria attend school.

[6] H. P. Holzer and J. S. Chandler, "A Systems Approach to Accounting in Developing Countries," *Management International Review*, vol. 21, no. 4 (1981): 23.

[7] Ibid., p. 24.

parts.[8] For developing nations, the Nigerian experience re-emphasizes the need for more relevant and useful accounting systems which consider the environmental variables of operation and the level of accounting sophistication of financial information users. The conventional balance sheet, for example, has outlived its usefulness within the Nigerian context. It must be modified to meet the changing needs of the Nigerian accounting and business environment.

Following the Company Decree of 1968 which, to a very great extent, is a copy of the British Company Decree, the Nigerian accountant currently adheres to the reporting method with the conventional balance sheet, and profit and loss accounts previously mentioned. The Nigerian Company Decree of 1968 states: "Every balance sheet of a company shall give a true and fair view of the state of affairs of the company as at the end of its financial year, and every profit and loss account of a company shall give a true and fair view of the profit and loss of the company, . . ."[9] This Decree insists on fairness in financial reporting and does not in any form or manner emphasize relevance and objectivity in the accounting system and procedures. This in itself is a major problem of the Nigerian Company Decree as adapted from the British and, thus, is a major shortcoming in Nigeria's current overall accounting practices. Professionals generally accept the view that any financial statement will serve its communication function best when it organizes accounting data in the format most understandable to users. Such financial statements often avoid giving the impression of "conclusiveness," especially when one realizes that the usual balance sheet and earnings statements are not final statements in themselves but are dynamic in nature. Another vital point that accounting experts often associate with an "ideal" financial statement is that of making full disclosure of all important and material accounting information.

Given these facts, it becomes imperative to evaluate the entire concept of full disclosure in light of Nigeria's current accounting system in order to determine to what extent, if any, it has been successful in the Nigerian context. The study of the present Nigerian accounting system has shown major violations of some, if not all, of these acceptable standards of financial statement reporting. In no area are such pitfalls more noticeable than in the balance sheet, which is still prepared in the traditional format in Nigeria.

The major faults with this traditional method of preparing and reporting the balance sheet account are that it is not only foreign to the

[8] Ibid., pp. 23-28.
[9] The Federal Republic of Nigeria Official Gazette, Decree No. 51 — *Companies Decree of 1968,* vol. 55 (Lagos, 1968).

Nigerian accounting environment, but it is also too long and too complex to be comprehended by the various financial statement users in Nigeria. With respect to the accounting information generated from both the external and internal financial reporting needs, accounting systems in Nigerian industries are deficient. The information generated from external reporting formats provides little information relevant to investment decisions, and potential investors are uncertain as to the validity and reliability of that accounting information. Based on his observation, Mahon has also noted the lack of reliability of financial statements prepared in developing countries.[10] Seidler noted the inadequacy of financial information in Turkey.[11] The internal accounting system in Nigeria has also been noted to be deficient in these regards. It cannot be considered effective for top management's decision-making purposes because it is rudimentary and offers management little or no vital information. Seiler notes that:

> in a number of the less developed countries, information systems which provide reliable financial data are few in number . . . . each time a production, pricing or investment decision is made without adequate knowledge of its consequences, the probability of misdirected efforts, wasted resources and economic loss is increased.[12]

Suggestions for Improving Current Accounting Reporting

In his recent study, Skinner concluded the ultimate objective of accounting to be "to convey information that is relevant to the needs of the user."[13] Indisputably, this statement highlights "usefulness" as the primary objective of accounting, and is indeed accurate in the context of the Nigerian accounting environment. The various accounting information users in Nigeria include investors, trade unions, the government and government agencies, various institutions, and businesses. They are primarily nontechnical people, often uninformed and unsophisticated in financial and accounting matters. Given this fact, it becomes imperative that the Nigerian Institute of Chartered Accountants adopt necessary steps to reduce the use of technical terms and simplify formats to increase the reader's grasp of the message without jeopardizing the Institute's professional standards. Too great a devia-

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[10] James J. Mahon, "Some Observations on World Accounting," *Journal of Accountancy* (January 1968): 34-35.
[11] Lee J. Seidler, *The Function of Accounting in Economic Development — Turkey as a Case Study* (London: Frederick Praeger, 1967).
[12] Robert E. Seiler, "Accounting Information System and the Underdeveloped Nations," *Accounting Review* (October 1966): 653.
[13] R. M. Skinner, *Accounting Principles — A Canadian Viewpoint* (Toronto: Canadian Institute of Chartered Accountants, 1972), p. 304.

tion from the necessary standard accounting vocabulary may partially distort the financial statement's message to the users. The concept of materiality will inevitably become a vital element in preparing a suggested financial statement for the Nigerian financial information user as illustrated in Appendices 1 and 2. Such financial statements are simple, comprehensive, and are also written in layman's language. Nigerian users' lack of sophistication in interpreting these financial statements has been mentioned. Readers of financial statements usually center their interests around activities rather than technical and statistical discourse; therefore, it is imperative that reports reveal the ebb and flow of activities during the normal cycle of an enterprise. Such systematic reporting would enable the unsophisticaed reader to see the flow of "costs" into factors of production, and to determine the success/failure rate achieved in converting products or services into liquid funds, and in using liquid assets in different productive factors, as in liquidation of debts. Another advantage to this systematic approach to financial statement reports is that it increases the "beauty" of accounting as an art and a scientific discipline. For example, the relationship between assets and liabilities need not be completely lost; it should be a matter of secondary interest rather than a focal point of reporting.

Financial statements would better serve users in developing countries if they report profit information clearly, as well as reveal the nature of the business enterprise and the economic function of management instead of possibly distorting vital financial information. With every expansion of realization by the public that business provides Nigeria its primary source of consumption goods, and its wages (the primary means to buy what is produced), the Nigerian Institute of Chartered Accountants will be called to use accounting to make business understandable. Accurate and understandable reporting, as well as dependable auditing data, is very much in the public interest. The message in the financial statements should use fewer technical terms so that the users can understand the accounting information and thus become more adequately informed.

Varying from the traditional standardized balance sheet format may make presentation of financial data more informative, understandable, and clearer. As suggested previously, balance sheet data, as well as the profit and loss statement data, must be arranged to highlight the most significant aspect of the particular situation (Appendices 1 and 2). The heading need not always be that used in the British System. Whatever heading is used, many professional accountants in Nigeria contend that the balance sheet data need not be pre-

sented in the traditional format. Traditional arrangements should be modified whenever a useful purpose might be served without loss of information, the new balance sheet must substitute informative and descriptive phrases for technical terms, it must reduce complexities, and it must clearly separate the various parts of the message to meet the needs of unsophisticated users of financial information in Nigeria and in other developing countries.

Most of the published accounts of Nigerian companies are in the "T" account format. A "vertical" reporting format (Appendix 3), however, if properly arranged, should be appropriate within the Nigerian accounting environment. In this format, which is currently being suggested for universal application in Nigeria, current liabilities would be subtracted from current assets, thus directly disclosing working capital. To the amount of working capital thus reported, "other assets" are added and "other liabilities" deducted to determine the owner's equity (Appendix 3). This format, as opposed to the conventional format of reporting changes in a firm's financial position, has the advantage of highlighting working capital, an important reporting need, and also facilitates comparisons between years.

The current Nigerian accounting practice of using just one year's comparative figures for financial reporting purposes should be changed. Comparative figures for periods of no less than three years should be made compulsory for all businesses and institutions except in cases where the company has not been in operation for such a length of time. If these data cannot be reported in the body of the statement, they should be shown in subsidiary statements. This method of preparing the balance sheet and profit and loss statement has the advantage of disclosing important changes and gives an idea of the business' financial development over the years. In order not to mislead readers, the comparative figures should reflect the consistent application of generally accepted accounting principles from period to period. Any reason for noncomparability of the statements should be disclosed. It is strongly suggested that comparative figures for the same periods of earnings per share, if any, be shown immediately below the reported profit and loss statement. It is also vital that current market value per share and return on equity be shown immediately at the bottom of the reported balance sheet. This is primarily for Nigerian shareholders who are more interested in the profitability ratio than in the financial analysis ratio. Financial information that depicts profitability, and returns on equity and investments reported in the layman's language will be most useful in Nigeria.

Useful disclosures should be made in the body of the financial statement with a description of each item. Also, any additional useful information may be shown in footnotes or included in the firm's report to the directors.

Next, but most important of the recommendations, is the need for all statement items appearing to be described in clear, easily understandable language. Such simplified balance sheets, as compared with the present complex, traditional form adopted from the British, should be reworded to make them understandable to unsophisticated financial information users. Appendix 3 exhibits such a balance sheet.

The new series of accounting principles designed specifically to meet the needs of the Nigerian accounting and business environment would best serve Nigeria. Accounting principles, concepts, and practice will have meaning only if they are constantly tested and modified against the unique economic background of the nation involved. According to Professor Enthoven,

> . . . accounting must integrate with its socioeconomic environment. Since this environment differs from country to country, it follows that any profession that ignores its environment is heading for trouble or, at least, hampering its ability to render as full service to the country as possible. This does not mean, of course, that accounting professions must start from scratch, but rather that methods and procedures that have worked in one country cannot automatically be assumed to work in another.[14]

Since developing nations are often plagued with heavy inflation and the impact of rapid technological changes, the factors which determine what increases net assets may differ in such an environment from those in the developed nation. Professor Enthoven recommends current value accounting in the economies which are highly controlled by governments because there is considerable likelihood that current prices reflect current government policies which do not necessarily underlie economic reality.[15] Technical changes may occur faster in the developing countries than in the developed countries, and the need for accurate value measurement of such items as capital output for cost, profit, taxation, and replacement cost in developing countries may vary from that of developed nations.

In summary, what developing nations need are systematic and carefully planned accounting systems designed to meet the unique needs of the individual country's accounting and business environments. Vari-

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[14] Frederick D. S. Choi and Gerhard G. Mueller, *Essentials of Multinational Accounting: An Anthology* (Ann Arbor, Mich.: University Microfilms International, 1979), p. 607.

[15] Ibid., p. 407.

ables to be considered are type of economy, political system, business ownership, social climate, sophistication of business management and financial community, pace of business innovations, and stages of economic development.[16] Such accounting systems can be patterned after the accounting systems of developed nations, such as the United States, but they must be modified to suit the unique need of the accounting and business environment of the specific country as Professor Enthoven suggests.

[16] Choi and Mueller, *Introduction to Multinational Accounting,* pp. 23-28.

APPENDIX 1A. CONVENTIONAL METHOD OF PREPARING THE BALANCE SHEET STATEMENT

Nwosu and Sons Co.
Consolidated Statement of Financial Position
(Amounts in Thousands Naira*)

	December 31	
ASSETS	198	198
Current assets		
Cash and cash equivalent	4,581	2,592
Accounts receivable	46,584	28,815
Inventories	82,100	43,662
Deferred income taxes	5,314	3,428
Total current assets	138,579	78,497
OTHER ASSETS		
Goodwill and other intangibles	18,635	4,739
Property, plant and equipment		
Land	4,058	1,939
Buildings	39,040	24,101
Machinery and Equipment	91,423	59,469
Less allowance for depreciation	(39,934)	(35,646)
	94,587	49,863
Unexpended construction funds	222	1,842
	94,809	51,705
Total assets	252,023	134,941
LIABILITIES AND OWNER'S EQUITY		
Notes payable	4,500	0
Accounts payable	18,489	8,100
Accrued expenses	24,782	11,318
Taxes and other income taxes	13,027	7,971
Current maturities of long-term debt	1,300	1,390
Total current liability	62,098	28,779
Long-term debt and others	92,414	35,708
Capitalized lease obligations	3,758	4,060
Deferred income taxes	6,860	4,549
STOCKHOLDER'S EQUITY		
Preferred stock	60,688	48,383
Common stock (10 million shares at $5 par)	26,205	13,462
Total Liabilities and Owner's Equity	252,023	134,941

* Naira (Nigerian currency) = $1.58 U.S.

APPENDIX 1B. SUGGESTED BALANCE SHEET STATEMENT FOR USE IN THE NIGERIAN ACCOUNTING ENVIRONMENT

Nwosu Corporation
Simplified Report on Financial Position
December 31, 1980
(Amounts in Thousands Naira*)

	198	197
Our cash and other items readily convertible into cash are		
Money in form of cash held in safe	2,581	1,592
Money in form of cash held in bank	2,000	1,000
Amount owing to us by our customers	46,584	28,815
Materials and other stock of goods for sale or use	222	1,842
The total of the above items in terms of cash	51,387	33,249
Against this we owe the following:		
Amount due to our suppliers and others	22,989	8,100
Current expenses yet to be settled	26,082	12,708
Accrued taxes not yet paid	13,027	7,971
The total of what we owe currently	62,098	28,779
After settling what we owe currently, the net working capital left for business operations is	(10,711)	4,470
To this we add our plant, property and equipment	43,098	26,040
Machinery and plant (after deduction of allowance for wear and tear)	51,489	23,823
Investments and other property owned	106,049	51,829
Therefore, the total of what we have to work with is	189,925	106,162
Against this, if we deduct what we owe in terms of our long-term borrowing, deferred taxes, etc., totaling	103,032	44,317
We have the remaining balance	86,893	61,845
Represented by		
Investment preferred shareholders	60,668	48,383
Investment by common shareholders	26,205	13,462

* Naira (Nigerian currency) = \$1.58 U.S.

APPENDIX 2A. CONSOLIDATED STATEMENT OF CHANGES IN FINANCIAL POSITION

Nwosu Corporation and Subsidiaries
(Amounts in Thousands Naira*)

SOURCES OF FUND	198	197
Net earnings	7,009	4,975
Provisions for depreciation and amortization	4,440	4,372
Noncurrent deferred income tax	(1,358)	2,375
Total from operation	10,091	11,722
Decrease in assets + Other costs	4,498	0
Disposal of property, plant and equipment	1,496	781
Decrease in other assets	258	0
Increase in long-term debt	7,540	28,700
Increase in capital lease obligations	2,080	0
Increase in other long-term liabilities	509	0
Shares issued for acquisition	0	......
Shares issued — Stock option	153	242
	26,625	41,445
APPLICATION OF FUNDS		
Property + Other assets	0	......
Long-term depreciation, pension liability, others	0	......
Addition to property, plant and equipment	6,460	7,887
Unexpended construction fund	1,842	0
Cash dividends	2,420	2.135
Decrease in long-term debt	8,520	27,555
Decrease in capitalized liabilities	253	438
Decrease in other liabilities	518	861
Deferred realignment cost	......	2,197
Increase in notes receivable and other assets	......	174
Increase in working capital	6,612	154
Other, net	......	48
	26,625	41,445
INCREASE (DECREASE) IN WC		
Cash and cash equivalents	(1,954)	(1,869)
Accounts receivable and notes receivable	8,002	3,702
Inventories	7,139	2,072
Deferred income tax and prepaid expenses	(243)	(257)
Notes payable — Banks	0	......
Accounts payable	(261)	(4,099)
Accrued expenses + Other liabilities	(2,144)	806
Taxes, other than income tax	(63)	(396)
Income taxes	(3,917)	550
Current maturities — long-term debt	53	(355)
	6,612	154

* Naira (Nigerian currency) = $1.58 U.S.

APPENDIX 2B. STATEMENT OF SUGGESTED CHANGES IN FINANCIAL POSITION

Nwosu and Sons Company
(Amounts in Thousands of Naira*)

The source of our new working capital for running the business were made up of:	
Net profit and loss account	13,779
Add: Expenses *not* involving spending funds	
Allowance for wear and tear of buildings	19,967
Allowance for wear and tear of machinery	19,967
Provisions for deferred income taxes	6,860
Funds provided from internal operations	60,573
Add: External sources through which we raise funds	
Sale of preferred shares	33,536
Sale of ordinary shares	53,357
Borrowing on long-term basis	103,553
Total of our new working capital (internal and external)	251,019
From this we *deduct* the following uses made of funds	
Addition to buildings	34,040
Purchase of new lands	4,058
Part payment of long-term borrowing	40,538
Payment of dividends	
Preferred shares	15,000
Ordinary shares	10,000
NET INCREASE (DECREASE IN WORKING CAPITAL)	147,383

* Naira (Nigerian currency) = $1.58 U.S.

APPENDIX 3. SUGGESTED BALANCE SHEET ACCOUNT IN ITS VERTICAL FORMAT FOR THE NIGERIAN ACCOUNTING ENVIRONMENT

Nwosu and Sons Limited
Balance Sheet — Vertical Format
December 31, 198
(Amounts in Thousands Naira*)

Add ALL current assets	600
Less ALL current liabilities	(200)
Net working capital	400
Add "Other assets"	250
Less "Other liabilities"	10
OWNER'S EQUITY	640

* Naira (Nigerian currency) = $1.58 U.S.

Municipal Disclosure in England: Another Market for Excuses?

MAURICE PENDLEBURY and ROWAN JONES*

Accounting in the 1970s was characterized in the United States by a burgeoning of interest in municipal disclosure. Much of this took the form of prescriptive statements[1] and normative research.[2] If one be-

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[1] See, for example, American Institute of Certified Public Accountants, *Proposed Statement of Position on Accounting Principles and Reporting Practices for Nonprofit Organizations* (New York: AICPA, 1978); and R. N. Anthony, *Financial Accounting in Nonbusiness Organizations* (Stamford, Conn.: Financial Accounting Standards Board, 1978).

[2] See, for example, Kenneth S. Axelson, "Crisis in New York City: The Case for Municipal Accounting Reform," *Journal of Contemporary Business* (Winter 1977): 1-6; A. S. Boyett and G. A. Giroux, "The Relevance of Municipal Financial Reporting to Municipal Security Decisions," *Governmental Finance* (May 1978): 29-34; Coopers & Lybrand, *Financial Disclosure Practices of the American Cities: A Public Report* (Ann Arbor: Coopers & Lybrand and the University of Michigan, 1976), and *Financial Disclosure Practices of the American Cities: Closing the Communications Gap* (Ann Arbor: Coopers & Lybrand and the University of Michigan, 1978); S. Davidson et al., *Financial Reporting by State and Local Government Units* (Chicago: University of Chicago Press, 1977); Michael H. Granof, *Municipal Accounting Research: Some Observations,* University of Texas Working Paper 77-46 (Austin, 1977); Elizabeth S. Hansen, "Municipal Finances in Perspective: A Look at Interjurisdictional Spending and Revenue Patterns," *Journal of Accounting Research,* vol. 15 (Supplement 1977): 156-208; David H. Luthy, "Consensus on Municipal Disclosure," Collected Papers of the American Association Annual Meeting, 1979, pp. 52-68; James M. Patton, "An Experimental Investigation of Some Effects of Consolidating Municipal Financial Reports," *Accounting Review* (April 1978): 402-14; K. J. Rao, "The Consensus of Municipal Disclosure," Collected

lieves what researchers say, this intense activity was in no small part because of the New York City fiscal crisis: twelve of the studies cited in this paper refer specifically to New York City as a raison d'etre.[3]

Furthermore, the emphasis of the American research has largely concerned the information requirements of municipal bondholders. In England, such requirements have never been seriously considered either in theory or in practice because it has been implicitly assumed in the accounting literature that loans to local authorities are risk free.

This crisis in New York might be expected to provoke a similar research activity in England. This has not been the case, however, due largely to the belief that such a situation could never occur in that country. According to a press release issued in November 1975 by the Chartered Institute of Public Finance and Accountancy (CIPFA):

> The difficulties of New York City as reflected in their virtual inability to raise further loans have naturally caused people in this country [England] to ask "Can it happen here?" The plain answer is that the circumstances are so different as between the two systems that there is absolutely no reason why it should.[4]

CIPFA suggested that the reason for such a difference in circumstances was that in England, the power of local authorities to borrow for current purposes "is strictly limited to temporary loans pending receipt of revenues due during the year in which the expenditure is incurred."[5]

It can thus be seen that CIPFA has not considered the events surrounding the New York crisis as sufficient reasons to encourage research activity in England similar to that experienced in the United States.

Papers of the American Association Annual Meeting, 1979, pp. 96-99; and R. P. Van Daniker and R. A. Maschmeyer, "An Empirical Investigation into User Needs of State Government Financial Reports," Collected Papers of the American Accounting Association Annual Meeting, 1979, pp. 102-9.

[3] Anthony, *Financial Accounting;* Axelson, "Crisis in New York"; Boyett and Giroux, "Municipal Financial Reporting"; Coopers & Lybrand, *Financial Disclosure: Report;* Davidson et al., *Financial Reporting;* Granof, *Municipal Accounting Research;* D. T. Hansen, "Municipal Accounting and Disclosure," *Management Accounting* (May 1977): 23-24; Elizabeth S. Hansen, "Municipal Finances in Perspective," 156-208; M. W. Maher and E. C. Keller, "An Analysis of Reporting Practices of American Cities," Collected Papers of the American Accounting Association Annual Meeting, 1978, pp. 770-92; Rao, "Municipal Disclosure"; Abraham J. Simon, "Fiscal Accountability and Principles and Mechanisms of Disclosure for Major Local and State Governments in a Democratic Society," Collected Papers of the American Accounting Association, 1978, pp. 794-831; and Van Daniker and Maschmeyer, "State Government Financial Reports."

[4] Chartered Institute of the Public Finance and Accountancy, *Investment with Local Authorities in Great Britain* (London: CIPFA, 1975).

[5] Ibid.

The authors suggest in this paper, however, that this is merely an example of CIPFA's ability to provide excuses for taking no action to change the existing practices in local authority reporting. The authors will also provide further excuses offered by other protagonists in the municipal disclosure debate.

First, however, the authors feel it would be useful to put English municipal disclosure practices into perspective by describing the extant legislative and professional requirements. This is done in the next section. They will then describe the results of an empirical survey of the form and content of the published accounts of a sample of sixty English local authorities. The survey results indicate that these requirements are not being met.

LEGISLATIVE AND PROFESSIONAL REQUIREMENTS FOR MUNICIPAL DISCLOSURE IN ENGLAND

"The Form of Published Accounts" first published by the Institute of Municipal Treasurers and Accountants (now CIPFA) in May 1955 is still the profession's authoritative document. While attempting to provide for a uniform classification, form of presentation, and disclosure of accounts, this publication also recognized the need to allow for flexibility to meet the particular requirements of individual local authorities:

> Local authorities would be loth [*sic*] to see uniformity imposed from above, and would be particularly assertive of the need to highlight the special circumstances or outlook of individual councils. An attempt has been made to provide room for those local variations without doing violence to the general pattern.[6]

Moreover, as the chairman of the committee which produced the report said in June 1955:

> We have now evolved a form which we think gives flexibility, which is in accordance with the modern notions on accountancy, and which will enable, within limits, local chairmen and treasurers to exercise their whims.[7]

The publication included discussion of the following items: (1) the order of accounts in the published annual report, (2) the fund balance sheets, (3) the consolidated balance sheets, (4) statements supporting the balance sheets, (5) operating statements and levels of aggregation, and (6) definitions for categorizing expenditure and income.

However, it is important to note that the publication is not concerned with one of the fundamental issues of accounting, the allocation

[6] Institute of Municipal Treasurers and Accountants, *The Form of Published Accounts of Local Authorities* (IMTA, 1955), p. 2.

[7] A. H. Marshall, "The Form of Accounts," *Local Government Finance* (November 1955): 260-62.

problem. For example, capital expenditure for a school will appear in specified accounts, and its position within those accounts is prescribed, yet the allocation of historic cost between balance sheet and operating statement is entirely flexible; the revenue charge can in fact vary between 0 and 100 percent.

In addition to these professional regulations, a central government statutory instrument, the Accounts and Audit Regulations 1974, provides, inter alia, that:

1. The published accounts must be prefaced by a statement of the main principles adopted in compiling the accounts, and that statement must draw attention to any significant changes in practice.
2. The main principles referred to in (1) above include the following:
   a. the basis on which debtors and creditors are included in the account,
   b. the nature of substantial reserves,
   c. the basis on which provision is made in the operating accounts for the redemption of debt,
   d. the basis on which capital expenditure is recorded in the balance sheet,
   e. the basis of valuation of real property and investment,
   f. the basis of depreciation provisions,
   g. the extent to which central administrative expenses are allocated over services.
3. The published accounts should contain audited balance sheets, capital accounts and operating accounts as well as such explanation of the documents as is deemed necessary.
4. The published accounts must contain a copy of the auditor's certificate.
5. The published accounts must include corresponding amounts for the previous year.[8]

In summary, it is clear that the profession considers

> ... that sufficient uniformity, and at the same time greater elasticity, can be achieved voluntarily. Complete uniformity is not desired or expected either between local authorities or between the services of the same authority, and therefore ... (the profession) ... does not advocate statutory regulation.[9]

We have also seen, at least until recently, that the government has itself supported this position. This lack of authoritative prescription

[8] *Accounts and Audit Regulations,* Statutory Instrument No. 1169 (London: Her Majesty's Stationery Office, 1974).
[9] Chartered Institute of Public Finance and Accountancy, *The Standardization of Accounts: General Principles* (London: CIPFA, 1979).

might be expected to lead to disquiet concerning municipal disclosure. Moreover, in the next section, the authors note that when actual practices are examined, there is even greater cause for concern.

EMPIRICAL FINDINGS FROM A SURVEY OF THE ACCOUNTS OF SIXTY ENGLISH LOCAL AUTHORITIES

Of the professional requirements concerning the accounts to be disclosed in annual financial reports, exhibit 1 indicates that 62 percent of the respondents in the authors' sample produced individual fund balance sheets and 77 percent produced consolidated balance sheets.

All elements of the sample included operating statements, but there were substantial differences in the level of aggregation, as reflected in exhibit 1. The effect of this is that whereas one authority might disclose the expenditure on the salaries of primary school teachers, secondary school teachers, and so on, another local authority might disclose merely the total expenditure for the entire education service.

If we now consider the requirements of the government, it is apparent that only 47 percent of the sample produced a narrative report and only 28 percent had auditors' certificates attached. Most of the accounts in the sample contained statements of principles, although the majority were by no means complete.

Thus, it is clear that in England there has been little attempt by the profession to impose uniform regulations concerning local authority accounting practices, and even where statutory requirements have been

Exhibit 1. Form and Content of Local English Authorities' Published Accounts 1977/78

	Number of authorities	Percentage of sample
Fund balance sheets	37	62
Consolidated balance sheet	46	77
Operating statements — Level of aggregation		
Service	6	10
Division of service	27	45
Standard group	23	38
Subgroup	2	3
Detail head	2	3
Statement of principles	59	98
Narrative report	28	47
Accounts audited	17	28
Total number of authorities in sample	60	100

Source: Adapted from Rowan Jones and Maurice Pendlebury, "Uniformity v. Flexibility in the Published Accounts of Local Authorities," *Accounting and Business Research* (Spring 1982): 129-35.

introduced, for example the need for auditors' certificates, these have frequently not been met.

In the last year or so, however, we have seen that the government is determined to establish much closer control over the form and content of local-authority published accounts.[10] Such moves by the central government are being resisted by CIPFA,[11] and the situation is further complicated by the fact that the Institute of Chartered Accountants in England and Wales has become involved in the debate.[12] The next section analyzes the respective positions of these three bodies and attempts to determine the rationales or excuses of each.

RATIONALES OF POSITIONS

The Central Government

The U.K. government is presently seeking from Parliament the authority to prescribe the form and content of municipal disclosure.[13] The reason stated is that "the Government believes that to assist the public there is a need to establish a more uniform approach."[14]

This is perhaps not surprising since it seems innocuous enough to suggest that performance of local authorities might be better judged if information is presented in such a way as to facilitate comparability. What is surprising is that whereas in the past the government has left such matters to the profession, it now feels the necessity for regulatory legislation. It could be, of course, that the government is frustrated by the inaction of the profession and feels that it must act itself to protect public interest. When viewed against the backdrop of the serious attempts of the government to restrict public spending, however, this can perhaps be seen more as an excuse for its attempts to obtain wider control of the affairs of local authorities. For example, a demonstration that greater comparability can more readily indicate disparities in the costs of services provided by different authorities could provide popular support for the government's policies. It is important to realize that in the United Kingdom, local authorities are legally auton-

[10] Department of the Environment, *Publication of Financial and Other Information by Local Authorities: A Consultation Document* (DOE, 1979).

[11] Chartered Institute of Public Finance and Accountancy, *Publication of Financial and Other Information by Local Authorities: Comments on the DOE Consultation Document* (London: CIPFA, 1979).

[12] Institute of Chartered Accountants in England and Wales, *Publication of Financial and Other Information by Local Authorities: Comments on the DOE Consultation Document* (London: ICAEW, 1979).

[13] *Local Government, Planning and Land Bill* (London: Her Majesty's Stationery Office, 1979). This subsequently became the *Local Government Planning and Land Act 1980* (London: Her Majesty's Stationery Office, 1980).

[14] DOE, *Financial and Other Information,* p. 1.

omous regarding the power to levy local taxes. This means that, although an average of 61 percent (in 1980/81) of local authority net operating expenditure is financed by the central government, any attempts to restrict this can be easily avoided by increased local tax levies. Ultimately, therefore, the central government is powerless to control local authority spending, and, given current policies, it is evident that this involvement with accounting practices and disclosure requirements is consistent with the central government's attempts to widen its control over municipal affairs.

CIPFA

CIPFA's response to the government's proposals for legislation is well summarized:

> ... for the government to prescribe in detail the information to be published ... would be neither practicable nor desirable. [CIPFA] therefore advocates the development of a voluntary code of practice dealing with the disclosure of financial information.[15]

The excuses offered are two fold: that the public interest is not best served by statutory prescription where the emphasis tends to be on bureaucratic legislative reasons," and that statutorily imposed uniformity can produce rigidity which might reduce the relevance of the information over time.[16] Both these arguments are familiar examples of the rhetoric surrounding the uniformity/flexibility debate,[17] and while there might be some sympathy for this position, it is equally easy to sympathize with other points of view. The authors suggest, therefore, that in the light of history, these arguments might be construed simply as further excuses produced in defense of the status quo. Almost eighty years ago, researchers were expressing concern over the diversity of practice in producing published accounts.[18] In December 1927, the editorial of the *Financial Circular* contained the following comment:

> There is no recognised practice by which ... outlay on ordinary revenue account is allocated uniformly to one heading or another, nor are we clear as to what expenses are to be debited, say, to central establishment expenses or direct to departmental expenses.
>
> So we might continue to develop our theme: in short we have neither uniformity in account keeping and the publication of accounts nor any attempt at it, although surely all must agree that we appreciate the need of it. If we do

[15] CIPFA, *Comments on the DOE Consultation Document,* p. 2.
[16] Ibid., p. 1.
[17] See, for example, T. F. Keller, "Uniformity vs. Flexibility: A Review of the Rhetoric" in *Financial Accounting Theory 1: Issues and Controversies,* S. A. Zeff and T. F. Keller, 2nd ed. (New York: McGraw-Hill, 1973), pp. 184-97.
[18] C. R. Butterworth, "Abstract of Accounts," *Financial Circular* (Supplement April 1906): xxxv-xxxix.

not, we take up an attitude which amounts to a denial of the claim that anyone responsible for the expenditure of money provided by rates in one district of local government may derive any benefit from a study of the corresponding experience of other towns as recorded in their accounts and the published abstracts of those accounts.[19]

Writing in the July 1928 issue of the *Financial Circular,* C. H. Pollard stated that "standardisation of accounts seems to have been discussed without that necessary final endeavour to put the various suggestions fully into effect for at least a quarter of a century," and he went on to implore local authorities to agree on a standard form of published accounts and to put them into practice and not just allow them "to be pigeonholed to be referred to again in another quarter of a century."[20]

There was something almost prophetic about this observation, for although the issue did receive a further airing in 1938,[21] not until 1955 was a comprehensive statement on the form and content of published accounts accepted.[22] As noted earlier, however, this statement has little to do with uniformity, and even where it has, the requirements are not always followed.

Moreover, as stated in the introduction to this paper, the profession has ignored the implications of the single greatest agent of change in the United States, the New York City fiscal crisis. The reason offered, that local authorities cannot finance revenue deficits from borrowing, does not bear close examination, for it is undoubtedly true that the inability of New York City to raise sufficient taxes to finance its annual operating expenditure was concealed for fifteen years by the fact that revenue deficits were financed from borrowing. The current authors hypothesize, however, that even under the U.K. system, the financing of revenue deficits from loans could be hidden for at least three years, possibly more. For example, in the initial years, local authorities could cover any shortfall in current revenues by appropriations from balances. When the balances were exhausted and the operating budget was overspent, the deficit would be financed by temporary borrowing. The law, of course, stipulates this shortfall would have to be budgeted for in the subsequent financial year, but there is no guarantee that the outturn will be within this budget.

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[19] "Value of Money" (editorial), *Financial Circular* (December 1927): 327-28.

[20] C. H. Pollard, "Suggested Steps toward Uniformity of LA's Accounts and Records with a View to Obtain Reliable Comparative Statistics," *Financial Circular* (July 1928): 236.

[21] Institute of Municipal Treasurers and Accountants, *The Standard Form of Abstracts and Accounts* (IMTA, 1938).

[22] IMTA, *Published Accounts.*

Thus, the authors suggest that if a U.K. local authority suffering from underlying economic problems similar to those that affected New York sought to conceal them by deficit budgeting, the published accounting information would not necessarily reveal this.

There is no certainty that any financial reporting model would highlight a financial crisis of the proportions of that of New York any earlier than the ones currently used, but it is clear that the profession and researchers in America believe that such models can be developed. The present authors suggest that the possibility of similar developments occurring in the United Kingdom has been denied for reasons which once again might be seen as further evidence of the desire by CIPFA to retain the status quo.

Furthermore, the developments in the United States, as stated earlier, have emphasized the importance of the information needs of municipal bondholders. This is an aspect of accounting theory which has never been recognized by the profession in England, basically because of the implicit assumption that local authority debt is risk free. It is beyond the scope of this paper to examine whether or not this is in fact true,[23] but we can offer anecdotal evidence that it is unlikely to be so. As the Paymaster General stated in August 1975 in a written reply to a parliamentary question:

> Of course there will be a difference between the cost of borrowing to the Government and to local authority. This difference in a sense reflects the absence of a Government guarantee of local authority borrowing, which allows the small investor in local authority issues a higher yield than might otherwise be available.[24]

If local authority loans are not risk free, it would seem that there is a prima facie case for considering the information needs of lenders. There is little evidence to indicate that CIPFA has encouraged any form of research in this area, and this again seems supportive of the authors' hypothesis that there is a reluctance to consider proposals which might conceivably threaten the status quo.

The Institute of Chartered Accountants in England and Wales (ICAEW)

The main thrust of ICAEW's response has been to suggest that the published accounts of local authorities should be brought closer into line with those of limited companies. For example, "The presentation of

[23] For a subsequent investigation of the existence of a risk premium applicable to local authority debt, see Rowan Jones and R. Bailey, "The Riskiness of Local Authority Stocks — A Term Structure Analysis," *Investment Analyst* (October 1981): 13-20.

[24] E. Dell, written reply to a parliamentary question about local authority borrowing (Paymaster General, Treasury Chambers, 4 August 1975).

'consolidated' accounts should be standardized. More importantly their method of presentation should be based on the general concept of 'true and fair.' "[25]

Similarly, the ICAEW proposes that comparative figures should be provided over a five-year period, that the accounts should be published within six months of the financial year end, and that the accounts should be audited prior to publication. All these proposals were supported on the grounds of conformity with best commercial practice.[26]

This appeal to best commercial practice is not unique to the United Kingdom. (See for example, Coopers & Lybrand and Davidson et al., both of whom propose that governmental entities should report in accordance with generally accepted accounting principles.[27]) When considered in the context of the legislative requirements for local authority audits in the United Kingdom, however, it is possible to impute an alternative motive. Local authorities have a choice of having their accounts audited either by the government auditor or by approved auditors (individuals approved by the government and normally drawn from professional practice, in most cases from firms of chartered accountants). At present, the majority of local authorities are audited by the government auditor and consequently, any move away from this position would benefit approved auditors. Therefore, it seems not unreasonable to argue that the concern of the ICAEW over municipal accounting practices might be motivated, at least in part, by the possibility of increasing their market share.

SUMMARY

The determination of the acceptance of municipal disclosure in England appears to be shaped by groups protecting particular vested interests. The argument seems particularly strong in view of the fact that all three parties appeal to public interest in support of their position, yet it is evident that as far as the public is concerned, "there is no great burning national debate on the issue."[28]

CONCLUSIONS

In this paper, the authors have attempted to describe the current state of municipal disclosure in England. They have described what the

[25] ICAEW, *Financial and Other Information,* p. 15.

[26] Ibid.

[27] Coopers & Lybrand, *Financial Disclosure: Report;* and Davidson et al., *Financial Reporting.*

[28] M. Rogers, "Apathy Rules in the Great Rate Debate," *Accountancy Age* (18 April 1980): 17.

profession and statutes require and the extent to which current practice conforms to these prescriptions. They have also attempted to explain the positions taken by some of the principal protagonists in the recent controversy. The authors suggest that when the public interest reasons proposed for maintaining a position are analyzed in detail, these are often merely excuses to conceal vested interests.

Watts and Zimmerman might predict that this scenario would lead to an explosion of accounting theories in support of the various standpoints taken.[29] It seems evident that the level of research activity in England is much lower than that experienced in the United States and whatever the reasons might be, the authors welcome any change in this situation. Monitoring the developments in England over the next few years might prove to be an interesting test of their theory.

[29] R. L. Watts and Jerold L. Zimmerman, "The Demand for and Supply of Accounting Theories: The Market for Excuses," *Accounting Review* (April 1979): 273-305.

Current Cost Accounting in the United Kingdom and the United States: A Comparative Analysis

SURENDRA P. AGRAWAL*

After many years of debate and experimentation, the professional rule-making bodies in the United Kingdom and United States have promulgated standards of accounting for changing prices. In the United Kingdom, the Accounting Standards Committee has issued SSAP No. 16 that prescribes the use of current costs in addition to historical costs.[1] Its requirements are quite definitive yet permit a degree of flexibility in application. In the United States, however, the Financial Accounting Standards Board (FASB) has issued SFAS No. 33 which is rather tentative, indecisive, and very broad based, requiring disclosure of supplementary information developed under both general purchasing power and current cost accounting.[2] This paper presents a comparative analysis of the principles of current cost accounting contained in the two standards, focusing on the basic concepts and on dissimilarities observed, rather than on detailed rules or on matters that are essentially identical.

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[1] Accounting Standards Committee, "Current Cost Accounting," *Statement of Standard Accounting Practice No. 16* (London: ASC, 1980).

[2] Financial Accounting Standards Board, "Financial Reporting and Changing Prices," *Statement of Financial Accounting Standards No. 33* (Stamford, Conn.: FASB, 1979).

OBJECTIVES OF ACCOUNTING FOR CHANGING PRICES

Inflation has been a long-standing universal phenomenon and has reached double-digit levels during the past several years even in the economically advanced countries. Because of this, many people think that accounting information based on historical costs becomes outdated very quickly, and may be irrelevant — or even misleading — as a tool for decision making. In particular, many contend that net income computed in the conventional manner includes illusory paper profits, and that the values assigned to many items fail to show the current economic reality. Therefore, it is often believed that the primary purpose of accounting for changing prices is to make necessary improvements in the accounting model that would eradicate these deficiencies. According to SSAP No. 16, the

> basic objective of current cost accounts is to provide more useful information than that available from historical cost accounts alone for the guidance of the management of the business, the shareholders and others in such matters as:
> (a) the financial viability of the business;
> (b) return on investment;
> (c) pricing policy, cost control and distribution decisions; and
> (d) gearing.

SFAS No. 33 also attempts to enhance the usefulness of accounting information, but the areas in which it is expected to produce such improvements differ somewhat from those of SSAP No. 16; these include users' assessment of future cash flows, erosion of operating capability, financial performance, and erosion of general purchasing power. Obviously, the objectives of the American standard are wider, but more general; this is reflected in its requirements.

APPLICABILITY OF THE STANDARDS

Both standards are applicable to large public corporations. To be covered, a British company should meet two of three criteria that include elements relating to operations (sales revenue of £5 million, 250 employees) and position (balance sheet totals of £2.5 million). In the United States, only certain asset balances will qualify a company (inventory and property, plant and equipment of $125 million, or total assets of $1 billion). Apparently, to comply with the standard, the overall size of a British company could be much smaller than an American company. As a result, it may be expected that the number of companies in the United Kingdom and Ireland meeting the criteria would be four or five times as large as that in the United States.

DISCLOSURE REQUIREMENTS

There are significant differences in the information to be disclosed in the two countries. The British standard requires a comprehensive set of financial statements (profit and loss account and balance sheet) prepared with current costs. It gives companies a choice, however, in the relative importance they place on the historical cost and current cost statements. A company may present historical cost accounts as the main accounts, with supplementary current cost accounts; or present current cost accounts as the main accounts, with either supplementary historical cost accounts, or information adequate to ascertain historical cost profit. This flexibility seems to indicate that the accounting profession in the United Kingdom has decided firmly in favor of current cost accounts, and perhaps it is only a matter of time until these will be treated as the main accounts by all business entities. Furthermore, companies which treat the current cost accounts as the main accounts presumably would make formal decisions (such as dividend distributions) based on the results shown rather than use such results merely as a guide. Thus, the current cost accounts would have considerable force.

In the United States, all disclosures under SFAS No. 33 are to be supplementary to the historical cost statements. Two sets of such supplementary information are required: one based on the principles of general purchasing power accounting, and the other on current costs. In this regard, the American standard is more wide ranging than its British counterpart, but it requires only a limited amount of information: income from continuing operations under both principles, purchasing power gain or loss on net monetary items, current costs of inventory and property, plant and equipment, and increase or decrease in such costs during the period, net of inflation. This is referred to in the standard, however, as the minimum information required to be disclosed; as an alternative, companies are permitted to present comprehensive financial statements under either or both of the principles. While the standard provides detailed guidelines for developing the minimum information, there is a conspicuous absence of such guidelines for preparing comprehensive accounts, which would lead to considerable difficulties for companies that want to present the same.

The U.S. standard also requires disclosure of certain comparative figures for the last five years, all expressed in constant dollars either of the current year or of a base year. This information includes sales and revenues; income from continuing operations, such as income per share, and net assets — under both general purchasing power and current cost accounting; increases or decreases in the current costs of

inventory and property, plant and equipment, net of inflation; purchasing power gains or losses on net monetary items; cash dividends; and market price per common share. All of these items — including those measured in current losses — are required to be restated in constant dollars to make them comparable. In the United Kingdom there is no such requirement now, but the Accounting Standards Committee intends to develop a standard that may require the disclosure of comparative figures and five- to ten-year statements on a common price basis. In the meantime, companies are encouraged to provide such common price information voluntarily.

As indicated earlier, the discussion in the remaining parts of this paper will center around those requirements of the American standard that relate to current costs. Requirements based on general purchasing power accounting will be referred to only in a limited way.

VALUATION PRINCIPLES

The basic principle of valuation of the operating nonmonetary assets (inventory and property, plant and equipment) under both standards is a variation of current cost: the value to the business. This principle is based on the concept of deprival value which represents the loss a business would suffer from being deprived of an asset.[3] Such value is in essence a subjective value, but limits can be placed on its measurement by the following amounts: (1) current replacement cost of the asset; and (2) recoverable amount of the asset, which is the higher of (i) its current exit value and (ii) the net present value of the future cash flows expected from its use.[4] A reasonable measure of the loss is the lower of the amounts indicated in (1) and (2), and that is treated as the asset's value to the business. Both standards, however, depart from the theoretical concept, and each differs from the other in application. The British standard, instead of considering the net present value of future cash flows indicated in (2)(ii), utilizes the total amount of such cash flows. This departure might make a significant difference in the valuation of an asset — particularly a long-term asset — whose "recoverable amount" is lower than the replacement cost. For example, suppose the following figures relate to a fixed asset:

[3] For a theoretical discussion of the concept, see David Solomons, "Economic and Accounting Concepts of Cost and Value," in *Modern Accounting Theory,* ed. Morton Backer (Englewood Cliffs, N.J.: Prentice-Hall, 1966).

[4] For a discussion of the various adaptations of this concept, see David Tweedie, "Financial Reporting, Inflation, and the Capital Maintenance Concept," *ICRA Occasional Paper No. 19,* International Centre for Research in Accounting, University of Lancaster (Lancaster, 1979).

Current replacement cost	\$12,000,000
Current exit value	9,000,000
Expected future net cash inflows	11,000,000
Present value of the above inflows	7,000,000

Under the theoretical concept, the deprival value of the asset is \$9,000,000, whereas under the British standard, its "value to the business" amounts to \$11,000,000.

The American standard departs from the theoretical concept in another manner. In determining the recoverable amount of an asset, it does not compare the current exit value and the present value of future cash flows; rather, it uses only the current exit value for an asset that is about to be sold, and the present value of future cash flows if such sale is not intended. In the foregoing example, if the asset was soon to be sold, it would be valued at \$9,000,000; but if no immediate sale was intended, that amount would be \$7,000,000. The American standard can be accused of leaving the valuation to management's intentions; but it can also be considered quite close to the theoretical concept if a realistic view is taken of such intentions. Under the facts given, it would be irrational for an entity to continue using the fixed asset, because that would give it a net present value of only \$7,000,000, while \$9,000,000 could be obtained from its immediate sale.[5] Therefore, this asset would be considered as one about to be sold, under which assumption the valuation required by the American standard is identical to the theoretical concept. However, there is another difficulty with the American standard in that it provides no guidance as to the selection of an appropriate rate of discount needed to determine the present value of future cash flows. It seems that this question has not received adequate attention in the literature. Therefore, companies that must use this basis of valuation will be faced with a problem for which no solution has been developed either in theory or in practice.

A new asset may not have the same service potential as an existing asset. This may happen because of technological changes that result in differences in life, output capacity, nature of services and/or operating costs. The American standard requires that the cost of the new asset be adjusted for the value of such differences. It recommends the use of methods, such as functional pricing or unit pricing, under which the current cost of a unit of service embodied in the asset owned is measured and the current cost per unit is multiplied by the appropriate

[5] Obviously, an investment of \$9,000,000 with a yield equaling the discount rate used in these calculations will provide net cash inflows in the future totaling more than \$11,000,000.

number of service units. But these methods fail to consider the differences in operating costs, and also perhaps the differences in life. In the United Kingdom the guidance notes consider the problem in somewhat greater detail. For differences caused by output of life, these notes suggest direct apportionment of the current cost of the modern asset, but do not offer a solution to the problems relating to differences in operating costs. Thus, both standards fail to resolve a significant issue connected with the determination of the current cost of operating assets.[6]

The British standard also sets principles of valuation for items other than operating assets. Investments in associated companies and intangible assets (except goodwill) are required to be stated at the best estimate of their value to the business; other investments at directors' valuation (normally market value); and goodwill, current assets (except inventories), and all liabilities at historical costs. Most of the items in the last category are those for which a concept of current costs is not well developed. This is particularly true for liabilities that have been a matter of controversy. The British standard has taken a pragmatic approach by evading the issue, although at the cost of theoretical perfection of the model adopted. In the United States there is no specific provision for the revaluation of items other than inventory and property, plant and equipment. But if an entity chooses to present comprehensive current cost statements, it might value its other assets and liabilities on a current cost basis.

In the United Kingdom, stockholders' equity is not revalued as such; but it will include "current cost reserves" that do not appear in historical cost statements. These "reserves" comprise cumulative amounts of changes in specific prices of various assets, as well as amounts corresponding to other adjustments made in the income statement with respect to changing prices (which will be discussed in detail later). It may be noted that the changes in specific prices referred to here indicate replacement costs, not value to the business, since a reduction from replacement cost to recoverable amount does not affect the current cost reserves. The American standard does not deal with stockholders' equity, and it is not clear what additional items would be included there. The minimum supplementary information includes the amount of increase or decrease in the current cost of inventory and property, plant and equipment, net of inflation. However, this increase or decrease is that which took place during the current period only,

[6] For a detailed discussion on this problem, see S. P. Agrawal, R. C. Hallbauer, and G. W. Perritt, "Measurement of the Current Cost of Equivalent Productive Capacity," *Journal of Accounting, Auditing and Finance* (Winter 1980).

not an accumulated amount; therefore, it cannot be properly treated as an addition to stockholders' equity. Furthermore, the change is calculated with reference to the value to the business, rather than to the replacement cost, thus representing the difference between historical cost (or last valuation) and value to the business.

PRINCIPLES OF INCOME DETERMINATION

Principles of income determination under current cost accounting have been a matter of considerable controversy,[7] and both standards attempt a compromise, though in different ways. In the United Kingdom, current cost income is computed in two stages: operating profit and profit attributable to shareholders. There is no comparable classification in the United States, but an entity is required to disclose its income from continuing operations on a current cost basis, and a concept of distributable income may be developed by combining this amount and other pieces of information disclosed under the standard.[8]

Several adjustments must be made to convert the conventionally derived historical cost income into current cost income. Some of these adjustments are similar under both standards, while others are different. The two common ones are depreciation adjustment and cost of sales adjustment (COSA). These are needed to modify the expense items that represent consumption or utilization of assets most affected by changing prices. The objective is to compute the total amount of an expense on the basis of the value used in the balance sheet with respect to the related asset. Where the current replacement cost represents such value, the adjustments would be alike under the two standards. Where the related asset is valued on the basis of its recoverable amount, which is computed differently under the two standards, the adjusted amount of the expense may also differ. Continuing the example used earlier, the total depreciation on the fixed asset by the British company will be calculated on the basis of a cost of $11,000,000, while the American company will base it on $7,000,000 (assuming it intends to continue using the asset). It should be observed that in the long run, if the expectations prove correct, the U.K. company will show no profit or loss arising from the use of the asset, as the lifetime depreciation will equal the lifetime net cash inflows. The U.S. company, however, will show a

[7] For a detailed discussion, see S. P. Agrawal and R. C. Hallbauer, "Advantages of Replacement Cost Accounting: A Critical Evaluation," *International Journal of Accounting* (Spring 1978).

[8] For several examples of such a combination, see S. P. Agrawal, "FASB Statement No. 33 and Maintenance of Capital," *Working Papers Series 80-12,* College of Administrative Science, The Ohio State University (Columbus, 1980).

lifetime income of $4,000,000, representing a return on the investment in the asset at the average rate utilized in the computation of the present value of the cash inflows. Furthermore, another disagreement in the figures under the two standards would arise at the time the asset is originally valued at its recoverable amount. In the United Kingdom, the difference between the current replacement cost and the recoverable amount (referred to earlier) is treated as a loss, which in the author's example amounts to $1,000,000. In the United States, no such loss is charged in the computation of current cost income.[9] Thus, the total income effect of the use of the fixed asset in the two countries over the long run will be as follows:

	In the U.K.	In the U.S.
Net cash inflows	$11,000,000	$11,000,000
Loss on revaluation	(1,000,000)	—
Total depreciation	(11,000,000)	(7,000,000)
Long-run net effect	Loss $1,000,000	Income $4,000,000

This difference raises important questions about the usefulness of the two alternative approaches to the concept of current costs, and the treatment of the loss on revaluation to recoverable amount.

In regard to depreciation, neither standard requires a catch-up adjustment for backlog depreciation in calculating income. Thus, the emphasis seems to be on the determination of a year's income in terms of costs prevailing during the year. However, to keep the carrying value of an asset at the proper level, it is esesential to increase the amount of accumulated depreciation. In the United Kingdom, this is done by transferring an appropriate amount from current cost reserves to accumulated depreciation.[10] An American company preparing comprehensive current cost statements may follow a similar practice.

The British standard requires two further adjustments for which there is no exact American counterpart, although a similarity exists between them and an item required to be disclosed in the United States. First, a monetary working capital adjustment (MWCA) must be made before arriving at the current cost operating profit. It represents the

[9] This is in distinct contrast with the corresponding provision relating to general purchasing power accounting in the American standard. If there is a reduction from general price level adjusted historical cost to lower recoverable amount of an asset, such reduction is required to be charged in the computation of income.

[10] Accounting Standards Committee, "Guidance Notes on SSAP No. 16: Current Cost Accounting" (1980). These notes are issued by the committee, but are described as "unofficial."

amount of additional (or reduced) finance needed as a result of changes in the input prices of goods and services used and financed by the business, and its amount is computed with reference to changes in such prices, as shown here:

$$W = M \times \Delta S \tag{1}$$

where W = monetary working capital adjustment
M = monetary working capital
S = change in specific prices relevant to the calculation

The MWCA complements COSA. Together they allow for the impact of price changes on the total amount of working capital used by the business in day-to-day operations. They can also be added and shown as one single item in the income statement.

The second adjustment is the gearing adjustment that is included in the computation of the current cost profit attributable to shareholders. The gearing adjustment is calculated by multiplying the total of the three operating adjustments described earlier by the proportion of net borrowing to net operating assets.[11] This procedure may be stated as follows:

$$G = [L/(I + M + F)]\,[D + C + W] \tag{2}$$

where G = the gearing adjustment
L = net borrowing
I = inventory
F = fixed assets
D = depreciation
C = COSA

If the operating adjustments were a debit, as they would normally be when prices are rising, the gearing adjustment would be taken as a credit. Thus, the gearing adjustment abates the effects of the operating adjustments in the proportion of leverage used by the entity. It indicates the benefit to stockholders which is realized during the period, measured by the extent to which a proportion of net operating assets is financed by borrowing.

As mentioned earlier, in the United States, there are no adjustments identical to those relating to monetary working capital and gearing. The

[11] Any gain or loss on the disposal of a fixed asset is, in substance, an adjustment to the depreciation previously charged on that asset. In view of this, the guidance notes indicate that the difference between such a gain or loss as calculated under historical costs and under current costs should also be included in the calculation of the gearing adjustment. However, this treatment is not extended to other current cost adjustments, such as those made to extraordinary or exceptional items and prior period items.

item that comes closest is the purchasing power gain or loss on net monetary items. There are, however, significant differences:

1. While the two British adjustments are included in the computation of income, the American standard prohibits the inclusion of purchasing power gain or loss in income from continuing operations. A company may conceivably include such gain or loss while determining the amount of distributable income, however.
2. The MWCA and gearing adjustment are computed on the basis of the changes in specific prices of goods and services, while the purchasing power gain or loss is based on changes in the general price level.
3. In the United Kingdom, a distinction is made between current monetary liabilities (which are considered in MWCA) and long-term liabilities (on which the gearing adjustment is based). There is no such distinction in the United States; in fact, the computation considers all monetary items — whether assets or liabilities, and whether current or long term — in determining one single amount. However, little effort would be needed to distinguish the gain or loss on the monetary working capital from that on long-term liabilities. Thus, if the decision model of an American company's management needs separate consideration of these effects, the figures could be obtained rather easily, although they would not be reported and would not be available to external users.
4. As mentioned earlier, the gearing adjustment merely abates the effects of the operating adjustments in the gearing proportion. Therefore, in the United Kingdom, during a period of rising prices, the current cost operating income, as well as the income attributable to shareholders, will be less than the corresponding amounts calculated under the historical cost principles. In the United States, the computation of the purchasing power gain or loss is independent of other adjustments, being solely based upon the amount of monetary assets and liabilities and the rate of general inflation. This may be shown by the following equation that differs significantly from equations (1) and (2):

$$P = \Delta U(M - L) \tag{3}$$

where P = the purchasing power loss

ΔU = increase in the general price index

If L is greater than M, P would be negative, indicating a purchasing power gain.

An American company with high leverage may have a large amount of purchasing power gain, which, in years where long-term assets are rela-

tively new, might even exceed the amount of other current cost adjustments to income. In such a case, the impact of inflation on the company's income can be seen in two parts. While the current cost income from continuing operations would be smaller than the corresponding amount under historical costs, if the purchasing power gain is added, the total will exceed the historical cost net income.

A simple example will easily demonstrate the point made in the preceding paragraph. Assume the following facts:

Historical cost operating income	$5,000,000
Depreciation adjustment	1,000,000
Cost of sales adjustment	600,000
Monetary working capital adjustment	400,000
Amount of monetary working capital	10,000,000
Amount of borrowing	50,000,000
Gearing ratio	75%
Increase in general price level	10%

Under these circumstances, a British company's current cost income figures could be calculated as follows:

Historical cost operating income		$5,000,000
Less: Depreciation adjustment	$1,000,000	
Cost of sales adjustment	600,000	
Monetary working capital adjustment	400,000	2,000,000
Current cost operating income		$3,000,000
Add: Gearing adjustment (75% of $2,000,000)		1,500,000
Current cost income attributable to shareholders		$4,500,000

But an American company would compute its current cost figures in a different manner:

Historical cost operating income		$5,000,000
Less: Depreciation adjustment	1,000,000	
Cost of sales adjustment	600,000	1,600,000
Current cost income from continuing operations		$3,400,000
Add: Purchasing power gain (10% of [50,000,000-10,000,000])		4,000,000
Total		$7,400,000

The current cost operating income of both the British and the American companies is less than the historical cost operating income, although the British company's figure is smaller than the American company's. The amount of income attributable to stockholders needs more atten-

tion. In the case of the British company, this amount is $500,000 *less* than the historical cost figure; but the total of the American company's income from continuing operations and purchasing power gain is $2,400,000 *more* than that.

The situation just described is unlikely to persist for many years. With the passage of time, as the amount of accumulated depreciation grows larger, the position will tend to reverse itself, and the long-run current cost figures in total will be less than the historical cost income total, even for American companies.

In addition to the principal adjustments mentioned here, the British standard requires that, subject to practicability, other items appearing in the income statement also be stated in accordance with the principles of current cost accounting. These items include gains and losses on asset disposals, extraordinary and exceptional items, prior year items, income from associates, group consolidation adjustments, minority interests, and translation of foreign currencies. There is no similar requirement in the American standard, but companies preparing comprehensive current cost statements might make such restatements.

CAPITAL MAINTENANCE CONCEPT

One of the significant differences between British and American standards relates to the concept of capital maintenance. This concept provides the basis for the determination of income, particularly in the long run. In the words of the FASB, the "computation of income rests on a concept of capital — a stock of economic resources (net of certain obligations) that must be maintained before any income can be said to be earned."[12] Several alternative concepts have been advocated in this regard, including (1) financial capital measured in nominal monetary units, (2) financial capital measured in units of general purchasing power, and (3) physical capital that represents operating capability. It is also possible to combine these concepts on the basis of sources of financing. For example, stockholders' equity could be maintained in terms of general purchasing power, and debt capital in nominal monetary units.

The achievement of a particular concept of capital maintenance depends upon the manner in which the amount distributed as income is determined. For example, if the revenues and expenses are based on actual cash flows (as in historical cost accounts), and the entire amount

[12] Financial Accounting Standards Board, "Financial Reporting and Changing Prices." *Exposure Draft: Proposed Statement of Financial Accounting Standards* (Stamford, Conn.: FASB, 1978).

of income so determined is distributed, the entity would maintain its financial capital in nominal monetary units. But if the revenues and expenses were modified for changes in general purchasing power, financial capital in terms of purchasing power units would be maintained. Similarly, if current costs are used in place of historical costs, a company may expect to maintain its physical operating capability. It must be noted that these statements are generalizations based on simplifying assumptions, which include making certain essential adjustments and reinvesting sheltered funds in a suitable manner.[13]

Under the British standard, the current cost profit attributable to shareholders reflects the income for a period after allowing for the impact of specific price changes on the funds needed to maintain shareholders' proportion of the operating capability, while the lenders' capital is provided for in accordance with their repayment rights (that is, in nominal monetary units). Thus, the standard represents a balanced combination of concepts (1) and (3) mentioned earlier, considering the sources of financing. The achievement of this combination of the capital maintenance concepts has been ensured by the following requirements: making the depreciation, cost of sales, monetary working capital, and other operating adjustments; charging the reduction from current replacement cost to lower recoverable amount of an asset against income; and making the gearing adjustment. A criticism that might be leveled against this plan is the absence of backlog depreciation. But this should generally not create a significant difficulty, because the funds sheltered by depreciation and other noncash charges will be retained within the business, and, therefore, will lead to additional sheltering of funds in the future through the various adjustments to income just mentioned. If an entity wants to maintain its full operating capability, however, it may have to increase its borrowings and keep its gearing ratio constant also. The British standard does not deal with the maintenance of financial capital in general purchasing power terms; but companies are permitted to provide information about the change in the stockholders' net equity interest after allowing for the change in the general purchasing power of money.

In distinct contrast to the British position, the American standard does not express a preference for any particular concept of capital maintenance. The FASB's position is that enterprises should present information that would enable users to assess the amount of income

[13] For a detailed discussion of some of these ideas in the context of the maintenance of capital invested in fixed assets, see S. P. Agrawal, "Inflation and Replacement," *Indian Journal of Accounting* (July 1980).

under any of the capital maintenance concepts mentioned earlier. The underlying assumption is that various items required by the standard to be disclosed as minimum information might be combined in different ways to determine the amounts of distributable income that would lead to the achievement of different concepts. However, these disclosures are not adequate for the purpose. For example, the absence of the amounts similar to MWCA and gearing adjustment, and of adjustments to items other than cost of goods sold and depreciated, would prevent the achievement of a concept of physical capital in proportion to stockholders' interest.[14] The FASB might like to look into this important matter in its comprehensive review of the standard.

CONCLUSIONS

From a comparison of the two standards, it seems that the British accountants have made a final decision to move from historical cost to current cost accounting and are now trying to resolve the difficulties of implementation. The American profession, however, still appears unsure of the best way to account for the effects of changing prices, and is therefore taking the smorgasbord approach — let the companies present various kinds of information, and let the users decide which information they want to use. Considerable similarities exist among the principles of current cost accounting contained in the two standards, but this paper has noted that there are subtle dissimilarities, too. These relate to important areas such as valuation of assets, determination of income, and maintenance of capital with the potential to cause significant differences in application. It is suggested that accountants in the two countries should continue to analyze the effects of these dissimilarities, and to study the ways of filling the gaps that still remain.

[14] For a detailed discussion, see Agrawal, FASB Statement No. 33.

The Usefulness of Different Accounting Disclosure Regulations: A German Experience

GUENTHER GEBHARDT*

In an information economics context, accounting regulations may be viewed as a set of rules governing the disclosure of the relevant aspects of a company's activities. Such regulations also promote a more efficient transformation and transmission of data and thereby facilitate their assimilation by the target user groups.

Since there is always a variety of more or less controversial proposals for the resolution of many different accounting issues, accounting legislators must make choices in order to specify a restricted set of mandatory accounting rules. Although there seems to be broad agreement on the overall objectives of accounting standard setting (that is, to provide helpful information for user decision problems), such agreement clearly does not give too much operational guidance when specific choices of accounting methods are to be made.

Neither, unfortunately, is accounting literature very helpful to legislators in this regard. Discussions of different accounting methods have mainly been conducted on a theoretical a priori level and have concentrated on logical appeal of the definitions used. Conceptual clarity is but one desirable attribute of an accounting method. Users of finan-

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cial statements might be expected to place more emphasis on how well accounting reports, based on alternative accounting policies, allow users to differentiate among firms. For example, creditors arguably prefer reports which best allow them to discriminate between future failing and nonfailing companies. Investors in common stocks are interested in reports which best identify companies promising relatively high future returns within their respective risk classes.[1] Similarly, employers, the Internal Revenue, and municipal and government authorities are interested in reports which best reveal the likely future development of companies. Clearly, these different purposes may not be best served by one particular accounting method. Thus, accounting standard setting for different users should be viewed as a process of reaching an acceptable compromise between the different groups affected by the choice of accounting methodology.[2] In order to reach acceptable compromises, however, it is necessary to know how different users are affected by the adoption of different accounting methods.

A comparison of the effects of alternative accounting methods on users shoud ideally be based on accounting data, prepared for a representative sample of firms, for the same period of time, and classified by the different accounting methods under scrutiny. The problem is that such desirable "real world data" are generally not available since, in most cases, a universal accounting method is used in the preparation of published accounting reports. Exceptions in the United States are, of course, the mandatory disclosure of the market prices of marketable securities, of leasing commitments, and of price-level-adjusted data. In a situation in which accounting data derived in accordance with different accounting methods (for the same set of firms during the same period of time) are not available, one should concentrate on an analysis of changes in accounting policies. Contrary to the continuous approach of a piecemeal revision of accounting standards followed, for example, by the Financial Accounting Standards Board (FASB), changes in statutory accounting regulations in the Federal Republic of

[1] This, of course, implies that the markets for common stocks are not completely efficient. The evidence suggests that, aside from the United Kingdom, European stock markets are generally inefficient with respect to the impounding of new information into market prices.

[2] For German accountants, it is of interest that the idea of viewing accounting standard setting as a process of determining compromises acceptable for conflicting interests is also gaining ground in the United States. See, for example, N. Dopuch and S. Sunders, "FASB's Statements on Objectives and Elements of Financial Accounting: A Review," *Accounting Review* (January 1980): 1. For reasons explained here, this view has always been the recognized basis in Germany where accounting standards are promulgated in form of law.

Germany are made discontinuously and comprehensively. The last fundamental change in German accounting legislation stems from the 1965 German Companies Act. An evaluation of the effects of the 1965 Companies Act on the users of published financial statements of German corporations is the concern of this paper.

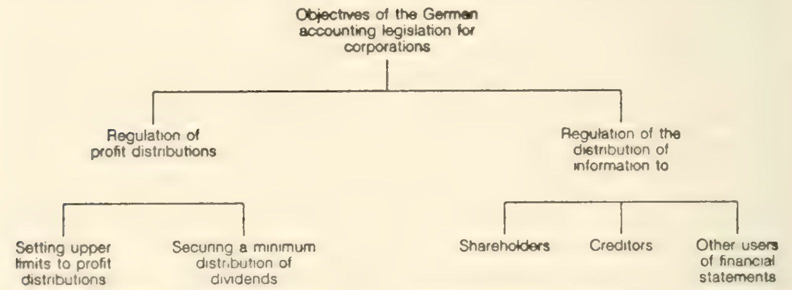
The paper consists of four sections. In the first, the objectives and major changes of the 1965 accounting legislation are outlined. The second section discusses the choice of an appropriate research design. In the third section, a summary of the empirical work is given, and the final section contains a discussion of the somewhat surprising results uncovered by the empirical work.

Although this study deals with a specific change in German accounting legislation, both the analysis and results have important implications within a broader context. In the process of an international harmonization of accounting standards and practices, substantial changes must be made by many countries. This is especially true of the European Economic Community (EEC) countries which are engaged in a reconsideration and reformulation of their accounting regulations in order to comply with the relatively stringent standards of the EEC's Fourth Directive. Since the directive (Art. 55) required the adjusted national accounting regulations to be enacted by August 1980 and become effective by February 1982, fundamental changes of accounting practices are forthcoming in the EEC states. By mid-1983 Belgium, Denmark, France, and the United Kingdom had adopted new legislation, whereas in the Netherlands, Italy, and the Federal Republic of Germany, the proposed legislation had not yet passed the parliamentary institutions. Because of the high awareness of the different social groups with regard to the economic effects of accounting legislation, the German federal government was not able to pass a bill to implement the directive even by September 1983. A first preliminary draft of a proposed legislation was published in February 1980. It was subject of controversial discussions leading to two substantial revisions by June 1981. It took almost another eight months before an again substantially revised draft was submitted to Parliament by the social-liberal government in February 1982. The new christian-liberal government did not take over this again heavily disputed draft from its social-liberal predecessors but introduced a new bill in June 1983 which is expected to pass Parliament by late 1983, thus missing the deadline for enacting the directive by more than three years. An outline of the objectives of German accounting legislation will explain this lateness of the German legislation.

THE 1965 REFORM OF THE GERMAN ACCOUNTING LEGISLATION: OBJECTIVES AND MAJOR CHANGES

Because changes in accounting legislation should be evaluated with respect to the stated objectives of the reform, we first outline the basic reasoning underlying the new legislation. Crucial to an understanding of the German accounting legislation is a recognition of the fact that these accounting rules are not designed solely to provide information useful to external users of financial statements. They are also intended to regulate profit distributions to common stockholders. Furthermore, financial statements serve as a starting point for the determination of corporate income tax liabilities. Exhibit 1 reflects the compromise character of German accounting regulations with respect to the conflicting objectives of regulations governing both profit distributions and the distribution of information.[3]

Exhibit 1. The Conflicting Objectives of the German Accounting Legislation



The purpose of the 1965 legislation was not to change the catalogue of objectives but to change and/or improve the provisions promoting the achievement of those objectives. The dissatisfaction of *shareholders* with the level of *dividend distributions* was a particularly important factor and, according to the official view, the 1965 act would lead to an improvement in the supply of equity capital. To achieve a better protection of shareholders against the frequently unjustified high retention of profits, substantial changes in the valuation principles were enacted. Whereas the provisions of the previous Companies Act set only upper limits to asset valuations, the new law also introduced mini-

[3] See, for example, A. Moxter, *Bilanzlehre,* 2 ed. (Wiesbaden: Gabler-Verlag, 1976), p. 51.

mum values at which assets must be shown in the balance sheet. An example serves to clarify the differences between the old and new legislation. Suppose that raw materials were purchased at $100 per unit. At balance sheet date, the price for the raw material has fallen to $80 per unit. Under the new legislation, these raw materials should, in principle, be shown at the lower market price of $80 per unit. An overconservative interpretation of the "prudence principle" was used under the old legislation to justify values even far below this "lower of cost or markets" rule. It would not have been unusual to value the raw materials as low as $50 per unit under the old legislation, thereby reducing profit and the amount available for dividend distributions accordingly.

Reducing the possibilities of creating "secret reserves" by the simple expedient of arbitrarily understating asset values, the new valuation rules should also result in better *information* for all *external users* of financial statements according to the official vindication of the legislation.[4] A refinement of the prescribed form of financial statements and the mandatory disclosure of additional financial data should also improve the information content of an individual company's financial statements. Furthermore, the new legislation introduced an obligation to prepare and publish consolidated financial statements. This paper is solely concerned with the 1965 *changes* in accounting regulations relating to the financial statements of individual companies. Specifically, it attempts to investigate whether the objective of improved information for external users has been attained. Because published financial statements are used by disparate groups who face very different decision problems, the following analysis is even more specific in that it is designed according to only *one* typical decision problem for *one* relevant group of financial statement users, that is, the *lending decision of a creditor.*

DESCRIPTION OF THE RESEARCH DESIGN

When a lender contemplates a loan to a corporation or investing funds in other ways, that person can be expected to consider carefully the possibility of the bankruptcy of the corporation in question. An analysis of the corporation's financial statements could cause the lender to change his or her evaluation of the probabilities of two relevant future states of the world "failure/nonfailure of the corporation." Such a change could in turn result in a different lending decision.

[4] See B. Kropff, *Aktiengesetz* (Dusseldorf: IdW-Verlag, 1965), pp. 15, 216, and 237 for the reasoning underlying the new legislation.

A revised evaluation of the probability of failure is arguably to be expected if the financial statements of corporations that will go bankrupt within the next few years disclose accounting ratio values which differ from the accounting ratio values of firms that will continue their operations. The ex post frequency distributions of financial ratios of failed and nonfailed firms can possibly be used as a basis for deriving ex ante probability distributions. Here, it is explicitly assumed that expectations concerning future states of the world are formulated on the basis of observed frequencies in past periods.

In the present study, the effects of alternative accounting regulations are analyzed by means of a comparison of two identically designed predictive ability studies. This choice of research methodology was the result of a careful examination[5] of other approaches used in evaluating alternative accounting methods.[6]

In particular, the idea of a study of the impact of the reform on capital markets was rejected for the lack of valid evidence regarding the efficiency of the German stock exchanges.[7] Further, the inadequacy of applying a conventional market-model methodology to fundamental changes of accounting legislation, such as the German 1965 Act or the U.S. Securities and Exchange Act of 1934, has been noted by Gonedes and Dopuch.[8] More recent studies of fundamental changes in accounting legislations by Coenenberg and Moeller in the German 1965 Act and by Hawanini and Michel on the 1976 revision of accounting legislation in Belgium, however, employ refined market methodologies which overcome the deficiencies of earlier studies of this type.[9]

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[5] See G. Gebhardt, *Insolvenzprognosen aus aktienrechtlichen Jahresabschlüssen* (Weisbaden: Gabler-Verlag, 1980).

[6] See N. J. Gonedes and N. Dopuch, "Capital Market Equilibrium, Information Production, and Selecting Accounting Techniques: Theoretical Framework and Review of Empirical Work," *Studies on Financial Accounting Objectives: 1974* (Supplement to *Journal of Accounting Research,* 1974): 48-129.

[7] For a discussion, see R. H. Schmidt, "Eine Widerlegung der Effizienzthese?" *Zeitschrift für betriebswirtschaftliche Forschung* (January 1981): 36. The existence of serial correlations of time series of price changes of German securities is not compatible with the concept of efficiency.

[8] See Gonedes and Dopuch, "Capital Market Equilibrium," p. 93, for a critical examination of a paper by Benston on the 1934 Securities Exchange Act.

[9] See A. G. Coenenberg and P. Moeller, "Entscheijdungswirkungen von Jahresabschlussinformationen vor und nach der Aktienrechtsreform von 1965, *Betriebswirtschaftliche Forschung und Praxis* (1979): 438; and G. A. Hawanini and P. Michel, "The Information Content of the Belgian Financial Reporting Regulation Act of 1976." Paper presented to the Fourth Congress of the European Accounting Association, April 13-15, 1981, Barcelona, Spain.

Selection of Failed and Nonfailed Firms

Failure was defined in terms of the commencement of the specific German legal proceedings which result in either the liquidation of the business by a receiver ("Konkurs") or an agreement on the pro rata settlement of debts with the debtor continuing to run the corporation ("Vergleich"). Because most cases are treated with the utmost discretion, other forms of failure settled outside the courts could not be included.

Of the list of all failed German corporations (excluding banks and insurance companies) in the period 1963 to 1974, only forty-five failed corporations met the imposed data requirement, namely, that at least three consecutive financial statements prepared under the same accounting legislation should be available from the last five fiscal years preceding the failure date. Evidently, there are German corporations which do not meet the disclosure requirements of the Companies Act. Obviously, many of the corporations in financial difficulties stop publishing their financial statements a few years before failure — a fact known to creditors. The financial statements for the periods immediately before failure were available only occasionally.[10]

To control for effects other than the change in the accounting legislation, a deliberate pairwise selection of a failed corporation and a similar — with respect to the lines of business and size, measured by total assets and gross profit — nonfailed firm was made. Had our primary concern been with an analysis of the possibilities of predicting failure, we would have preferred a random sample of nonfailed corporations since failed corporations differ substantially from the universe of nonfailed corporations with respect to the matching criteria described.

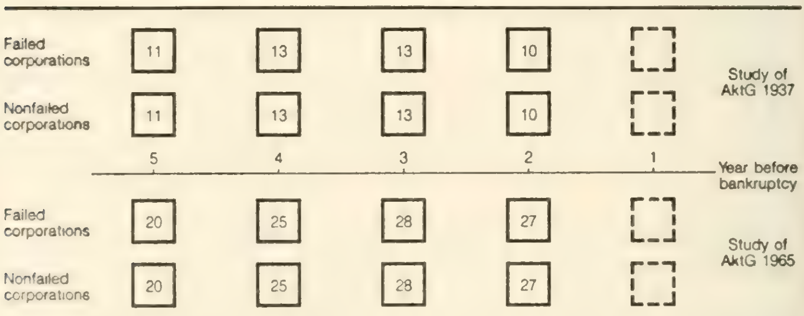
In the study of the old legislation (Aktiengesetz enacted 1937: AktG 1937), financial statements covering the years from 1961 to 1966 were used, whereas the empirical basis for the study of the new legislation (Aktiengesetz enacted 1965: AktG 1965) consisted of financial statements for the periods 1967 to 1974. Since financial statements from different periods of time were used, the technique of an identical pairwise selection should control for the disturbing effects of possibly different macroeconomic developments in the respective periods. This would not be sufficient to explain the results without

[10] C. L. Norton and R. E. Smith, "A Comparison of General Price Level and Historical Cost Financial Statements in the Prediction of Bankruptcy, *Accounting Review* (January 1979), p. 74. They also reported on the difficulties of obtaining the financial statements of U.S. firms for fiscal years immediately preceding failure.

answering the question of whether the macroeconomic developments were really substantially different in both periods. The classification results presented here are based on differences in the values of the financial ratios of failed and similar nonfailed German corporations and are calculated from the data of financial statements prepared where possible for the same fiscal years. Consequently, it should be explained further how a different macroeconomic development could have been reflected in the differences of the values of financial ratios of pairwise very similar firms. We do not have evidence on this point.

Of the forty-five failed corporations meeting the imposed data requirement, four could not be paired with an at least approximately "similar" nonfailed firm. From the forty-one pairs of corporations, thirteen pairs were available for the study of the old legislation (AktG 1937), whereas the other twenty-eight pairs were used for the study of the new legislation (AktG 1965). In both studies, financial statements of the second, third, fourth, and fifth year before failure were analyzed. Because these four financial statements were not always available, the numbers of corporations used in both studies were as shown in exhibit 2.

Exhibit 2. Characterization of the Research Design



The number of German corporations available for study is therefore small. The comparison with well-known studies from the United States, or with hitherto published German studies on the prediction of failure, however, demonstrates that those studies have also been based on a small empirical foundation.[11] Because of the small sample sizes, meticu-

[11] E. I. Altman, "Financial Ratios, Discriminant Analysis and the Prediction of Corporate Bankruptcy," *Journal of Finance* (September 1968): 589-609; and E. B. Deakin, "A Discriminant Analysis of Predictors of Business Failures,"

lous care in the selection of a statistical methodology and the interpretation of the results is necessary. The corporations under consideration are mainly small or medium-sized firms operating in different industries. The highest absolute numbers of failure cases are to be observed in the construction industry, the metal manufacturing industry, the textiles industry, and in the areas of commerce and services.

Selection of Financial Ratios

An analysis of the choice of variables in previously published empirical work on the prediction of failure revealed that financial ratios were primarily selected because (1) they were often described as being useful in prominent textbooks on financial statement analysis;[12] (2) they gave successful results in earlier studies on the predictive ability of financial ratios;[13] and (3) researchers were interested in the predictive ability of certain types of financial ratios, especially ratios derived from funds-flow statements.[14]

From a theoretical standpoint, these approaches are deficient in that the variables to be tested are not formally derived from a convincing theoretical model on the evidence of impending failure that is to be found in the financial statements of business firms. Unfortunately, there is as yet no model of this type which has been successfully tested on different sets of data. Serious work in this respect has been done, for example, by Wilcox and Prihti, but the evidence for their empirical studies does not suggest that their models are definitive.[15]

In the absence of a satisfactory theoretical model, it was decided to provide a systematic test of the predictive ability of certain types of

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Journal of Accounting Research (Spring 1972); 167-79. They analyzed thirty-three and thirty-two pairs of corporations. A German study by Beermann was based on twenty-one pairs of firms. See K. Beermann, *Prognosemöglichkeiten von Kapitalverlusten mit Hilfe von Jahresabschlüssen* (Dusseldorf: IdW-Verlag, 1976).

[12] For example, see William H. Beaver, "Financial Ratios as Predictors of Failure," *Empirical Research in Accounting,* Supplement to vol. 4 (1966), *Journal of Accounting Research,* p. 77; and R. O. Edmister, "An Empirical Test of Financial Ratio Analysis for Small Business Failure Prediction," *Journal of Financial and Quantitative Analysis* (March 1972): 1479.

[13] Edmister, "Financial Ratio Analysis," p. 1478; and Norton and Smith, "Comparison," p. 79.

[14] See, for example, Beaver, "Financial Ratios," p. 79; and M. Perlitz, *Die Prognose des Unternehmenswachstums aus Jahresabschlüssen deutscher Aktiengesellschaften* (Wiesbaden: Gabler-Verlag, 1973), p. 49.

[15] J. W. Wilcox, "A Prediction of Business Failure Using Accounting Data," *Empirical Research in Accounting: Selected Studies,* Supplement to vol. 11 (1973), *Journal of Accounting Research,* p. 166; and A. Prihti, *Konkurssin Ennustaminen Taseinformaation Avulla* (Helsinki: Helsinki School of Economics, 1975) (with English summary), p. 124.

financial ratios. By deliberate intention, we considered only financial ratios which could be calculated from the financial statements of two successive years, including an externally prepared funds-flow statement. The availability of only three or four successive financial statements for each firm did not allow the use of techniques such as linear regression.[16] The evidence from previously published studies on the prediction of failure, however, does not suggest that more sophisticated techniques of financial statement analysis provide better predictors of failure.[17]

The starting point for the selection was a list of successful ratios in previous studies on the prediction of failure. Only ratios which could be calculated using data from two consecutive financial statements were classified according to the matrix presented in exhibit 3. This classification led to the result that the elements of the matrix marked "X" contained a greater number of successfully tested financial ratios,

Exhibit 3. Matrix of the Types of Financial Ratios Tested in the Empirical Work

Source	Balance sheet		Profit-and-loss statement			Funds-flow statement
Numerator / Denominator	Assets	Liabilities and net worth	Revenues	Expenses	Earnings	Cash flows
Assets	X 11	X 12	X 13	O 14	X 15	16
Liabilities and net worth	X 21	X 22	X 23	O 24	O 25	X 26
Revenues	X 31	32	O 33	X 34	X 35	O 36
Expenses	41	42	43	O 44	O 45	O 46
Earnings	51	52	53	54	O 55	56
Cash flows	O 61	O 62	63	64	65	O 66

[16] Used among others, by P. A. Meyer and H. W. Pifer, "Prediction of Bank Failures," *Journal of Finance* (September 1970): 857; and M. Blum, "Failing Company Discriminant Analysis," *Journal of Accounting Research* (Spring 1974): 16. Both studies used far less than the minimum number of thirty consecutive values of a financial ratio required by S. C. Wheelwright and S. Makridakis, *Forecasting Methods for Management* (New York: John Wiley, 1973), p. 198.

[17] For example, Blum, "Discriminant Analysis," p. 13, was not able to achieve better classification results with his more sophisticated "Failing Company Model" than Beaver, "Financial Ratios," p. 83, with his most successful "cash flow to total debt" ratio.

whereas only one (or not even one) successful ratio could be assigned to the other elements of the matrix. Because one can easily develop plausible a priori arguments (for example, why a ratio of the structure of expenses — element 44 — is potentially useful in predicting failure) in the same way as arguments are adduced in support of the choice of the aforementioned types of ratios, additional types of ratios marked "0" in exhibit 3 were selected. The systematic list of financial ratios also includes financial ratios frequently used in Germany. The full final list of eighty ratios is not presented here; only the most successful are considered in the following sections.[18]

Statistical Methods for the Development of Classification Rules

In published empirical studies on the prediction of failure, various techniques of statistical discrimination have been employed. Exhibit 4 gives a summary of the techniques used here. It expands the scope of multivariate methods used in the prediction of failure to different variants of a method of nonparametric discriminant analysis first proposed by Kendall.[19]

Exhibit 4. Statistical Techniques of Discrimination Used in the Empirical Work

	Number of variables used in a classification rule	
Assumption on the distribution of variables	One ("univariate techniques")	More than one ("multivariate techniques")
Variables are normally distributed ("parametric techniques")	—	1. Linear discriminant analysis 2. Quadratic discriminant analysis
No assumption on the distribution of variables ("nonparametric techniques")	Dichotomous classification test	1. Nonparametric discriminant analysis according to Kendall 2. Variants of the Kendall technique

[18] Details are given in Gebhardt, *Insolvenzprognosen*, p. 123.

[19] Hitherto nonparametric discriminant analysis has only been used in a German study by G. Weinrich, *Kreditwürdigkeitsprognosen* (Wiesbaden: Gabler-Verlag, 1978) and in a Dutch study by J. Bilderbeek, "An Empirical Study of the Predictive Ability of Financial Ratios in the Netherlands," *Zeitschrift für Betriebswirtschaft* (May 1979): 388-407. The empirical work for the present paper was completed in 1977.

In formulating classification rules, the different consequences of misclassifying failed (type I error) and nonfailed corporation (type II error) were explicitly recognized.[20] Since the costs of both types of error may be assumed to vary for different user-decision problems, we assumed a proportion of 11:1 (costs of type I error: costs of type II error) which is probably not unrealistic if one recognizes only the direct effect of rejecting the credit application of a future continuing firm. In addition, we used the proportion of 1:1 implicitly chosen in most of the other empirical studies on the prediction of failure.

After formulating classification rules, one must know further about the expected percentages of the two types of error which resulted. As is well known, a reclassification of the sample used in constructing a classification rule leads to an optimistically biased prediction of the success of the classification rule when applied to new cases.[21] This technique has often been used, however, even in recent studies[22] although the relevant statistical literature suggests the use of holdout methods. In the study reported in this paper, the Lachenbruch method was employed;[23] this method results in higher classification error rates than the biased reclassification method because it not only recognizes misclassifications using the optimal cutoff for all n cases, but also considers misclassifications which arise from the fact that the optimal cutoff for n-1 cases may not be identical with the optimal cutoff derived using all n cases. Thus, a multivariate classification rule using n-1 cases is not necessarily optimal also for all n cases. Rather, another selection of variables and/or weights of the variables may prove to be superior. On the basis of a limited holdout validation work, Norton and Smith[24] "believe the percentages misclassified [using the reclassification method]

[20] His failure to do so had already been noted by Beaver, "Financial Ratios," pp. 99, 123, as a limitation of his study. An explicit treatment of this issue can now be found in papers by E. I. Altman, R. G. Haldeman, and P. Narayanan, "ZETA Analysis," *Journal of Banking and Finance* (1977):43; and J. E. Ketz, "The Effect of General Price-Level Adjustments of the Predictive Ability of Financial Ratios," *Studies on Accounting for Changes in Prices: 1978*, Supplement to *Journal of Accounting Research*, p. 279.

[21] See R. E. Frank, W. F. Massy, and D. G. Morrison, "Bias in Multiple Discriminant Analysis," *Journal of Marketing Research* (August 1965): 250; and R. A. Eisenbeis, "Pitfalls in the Application of Discriminant Analysis in Business, Finance, and Economics," *Journal of Finance* (June 1977): 893.

[22] See R. Elam, "The Effect of Lease Data on the Predictive Ability of Financial Ratios," *Accounting Review* (January 1975):40; Beermann, "Prognosemöglichkeiten," p. 97; and Norton and Smith, "Comparison," p. 1.

[23] See P. A. Lachenbruch and M. R. Mickey, "Estimation of Error Rates in Discriminant Analysis," *Technometrics* (February 1968): 1-11, for a description of the method.

[24] See Norton and Smith, "Comparison," p. 78.

are 'biased,' but biased to nearly the same degree," so that their use in a comparison with the results of predictive ability studies should be justified. The results of the present study clearly contradict their statement. It was possible to construct multivariate classification rules using nonparametric discriminate analysis which, under the reclassification method, yielded absolutely correct classifications. Due to a lack of robustness to changes in the set of objects used to derive the classification rules, however, the latter were vastly inferior using the more realistic Lachenbruch method.[25]

SUMMARY OF THE RESULTS OF THE EMPIRICAL WORK

Results of the Univariate Dichotomous Classification Test

The dichotomous classification test, a simple nonparametric technique first employed by Beaver,[26] relies only on the assumption that cases can be ranked according to the values of a variable measured at least on an ordinal scale. Following a chosen rule — for example, minimizing the percentages or costs of misclassifications — optimal cutoff values can be found. Assuming that values of financial ratios are higher for nonfailed corporations (assumption 1), corporations with values above the cutoff are classified as "nonfailed," whereas other firms are classified as "failed." Under the alternative assumption that failed firms show higher values for the financial ratio under consideration (assumption 2), firms with values above the cutoff are classified as "failed."

For that very reason, for a number of ratios, a priori reasoning allowed no conclusive answer regarding which assumption to choose. Hence, in the data analysis, both assumptions were used throughout. Following the outlined procedure, dichotomous classification tests were run for each of the eighty financial ratios and each of the four years before failure in the studies of the old (AktG 1937) and of the new (AktG 1965) Companies Acts. Exhibit 5 gives the results of financial ratios which constantly performed best in both studies, ignoring the different costs of the two types of error. These results can be summarized as follows:

- Compared with the expected error of 50 percent on random assignment, the use of financial ratios clearly reduces the expected error rates in both studies (AktG 1937, AktG 1965).
- The lowest expected error rates in the years considered before failure cannot always be observed for the same financial ratios.

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[25] See Gebhardt, *Insolvenzprognosen,* p. 274.

[26] See Beaver, "Financial Ratios," p. 83, for a rough description of the technique. The procedure used in this study is described in detail in Gebhardt, *Insolvenzprognosen,* pp. 207-10.

• In the *study of the AktG 1937,* one can observe (1) constantly low expected classification errors up to four and five years before failure using ratios on the capital structure (20, 22, 23, 28), using horizontal

Exhibit 5. Percentage Error Rates Using the Dichotomous Classification Test without Recognizing the Different Costs of Errors of the Different Kinds

Financial ratio		Study of AktG 1937 year before bankruptcy				Study of AktG 1965 year before bankruptcy			
		5	4	3	2	5	4	3	2
20	Total debt/ Total assets	27.3	19.2	19.2	20.0	32.5	42.0	48.2	35.2
22	Retained earnings/ Total assets	22.7	15.4	15.4	20.0	40.0	30.0	30.4	35.2
23	Equity/Nominal value of shares	22.7	11.5	15.4	25.0	50.0	28.0	30.4	29.6
28	Monetary liabilities/ Total assets	27.3	23.1	26.9	30.0	32.5	34.0	30.4	31.5
40	Recurring cash flow/ Total inflow of funds	—	27.3	30.8	30.0	—	40.0	30.0	29.6
43	Investment in current assets/Recurring cash flow	—	41.7	22.2	23.1	—	34.6	25.0	27.3
47	Current monetary assets/Current monetary liabilities	22.7	19.2	19.2	30.0	37.5	36.0	44.6	29.6
48	Cash/Current monetary liabilities	27.3	46.2	46.2	55.0	30.0	32.0	30.4	33.3
54	Equity/Risky assets	31.8	26.9	19.2	20.0	52.5	48.0	35.7	31.5
65	Income taxes/ Average total assets ("tax profitability")	—	27.3	23.1	25.0	—	30.0	36.0	27.8
67	Net income/ Total assets	22.7	34.6	26.9	20.0	37.5	36.0	51.8	29.6
68	Recurring net income/Total debt	27.3	23.1	19.2	20.0	37.5	36.0	33.9	29.6
75	Net income/Average current debt	—	22.7	19.2	20.0	—	37.5	50.0	29.6
76	Net income before taxes/Average monetary liabilities	—	22.7	15.4	20.0	—	47.5	50.0	25.9
80	Cash Flow I/ Total debt	27.3	30.8	23.1	20.0	47.5	38.0	39.3	33.3
81	Cash Flow III/ Total debt	—	23.7	26.9	20.0	—	35.0	30.0	44.4
84	Dividends/Average equity	—	31.8	23.1	30.0	—	42.5	24.0	24.1
96	Recurring net income/Sales	40.0	38.9	15.0	18.8	30.3	27.9	35.4	28.6

structure ratios (47, 54), and using ratios of a debt-paying ability based on earnings (68, 75, 76); (2) within a shorter period of time before failure, additional good performance of profitability ratios (65, 67, 96), and of ratios of the debt-paying ability using cash flows (80, 81); and (3) in the second year before failure, slightly worse results than in the third year before bankruptcy, and some exceptionally good results already in the fourth year before failure.

• In the *study of the AktG 1965,* one can observe (1) only a few financial ratios performing well in all four pre-failure years under consideration; (2) good results even in the fourth and fifth year before failure with only two ratios derived from the balance sheet (28, 48) and one return-to-sales ratio (96); (3) with failure coming closer, good results from financial ratios using data from a funds-flow statement (40, 43, 84), and also a good performance of two capital structure ratios measuring the cumulative profitability of a firm (22, 23); and (4) only in the second year before failure, acceptably low expected classification errors with profitability ratios (65, 67), and with ratios of the debt-paying ability using earnings (68, 75, 76).

• It should be noted that *both studies* showed no acceptable classification results for ratios on the structure of revenues, expenses, and earnings, for turnover ratios, and for expense-to-revenue ratios. The results of ratios of the asset structure were good only in a few cases in the study of the AktG 1937, whereas good performance of these ratios could be reported more often in the study of the AktG 1965.

• From exhibit 6, one may infer that better classification results were achieved almost throughout in the study of the AktG 1937. Exhibit 6 contains a comparison of the number of better classification results in one of the studies considering all eighty ratios. Evidently, better results in the study of the AktG 1965 were achieved in most of the cases with financial ratios which do not give a successful classification of failed and nonfailed corporations.

Exhibit 6. Comparison of Classification Results of Each Financial Ratio In the Study of the AktG 1937 versus the Study of the AktG 1965

	Number of superior classification results		
Year before bankruptcy	Study of AktG 1937	Study of AktG 1965	Those with an expected error rate of less than 35.0%
5	43	13	4
4	58	22	6
3	57	23	6
2	58	22	10

When the different costs of the two types of errors are explicitly recognized, cutoff values were heavily influenced by the extreme values of the financial ratios shown by individual corporations. This explains why only a few financial ratios promising low expected costs of misclassification in more than one or two years could be observed. Hence, details of these results are not given here.

Results Using Linear Discriminant Analysis

Linear discriminant analysis is a well-known statistical technique for determining the weights a_j of a linear combination of the variables x_1

$$Z = a_1 \times x_1 + a_2 \times x_2 + \ldots + a_n \times x_n$$

in a way that maximizes the distance between the respective means of the Z-index values of the two considered groups of failed and nonfailed corporations. Using this technique in the context of failure prediction, Altman was the first to depart from a tradition of formulating ratio indices with subjectively selected weights.[27]

The technique requires a decision concerning which of the financial ratios are to be included in a ratio index. The extraordinarily large number of possible combinations of 80 ratios required a selection. For that purpose, a rank order of the ratios was formed according to the multivariate Mahalanobis measure of distance and was used to form combinations of two, three, four and so on, financial ratios in a process of stepwise forward selection. Obviously, by this procedure one does not test each possible (and consequently perhaps not the best) combination of ratios.

The resulting ratio indices were not accepted at their prima facie values. Rather, the possibility of an economic interpretation of the weights used was analyzed carefully. Examples of questionable classification rules can be easily found in studies using discriminant analysis. Beermann even recommended such rules for practical purposes. Although observing that failed firms show higher values of the debt/total assets ratio and that failed firms also show higher Z-index values, he ascribed the debt/total assets ratio a negative weight. Consequently, a higher debt/total assets ratio would result in a smaller probability of failure, according to the model presented,[28] a result not easily explicable in economic terms.

Increasing the number of financial ratios often results in economically meaningless weights. This can be explained by the high correla-

[27] See Altman, "Financial Ratios," p. 589.
[28] See Beermann, "Prognosemöglichkeiten," p. 102.

tion between the variables and causes an accidental weighting of the ratios. Such spuriously weighted variables were therefore removed from the rank orders of financial ratios. This elimination did not raise problems. The best results were generated by ratio indices whose weights could be interpreted economically. The addition of ratios with economically meaningless weights never resulted in lower classification errors but often led to a substantial increase in error rates. Moreover, in many cases an addition of ratios with meaningful weights failed to improve the holdout classification results.

The best results which yielded linear discriminant analysis are summarized in exhibit 7 and provide remarkable evidence that the most successful ratio indices comprise only two or three variables in the majority of cases.[29] In the *study of the AktG 1937,* the ratios chosen for the formulation of an index had mostly shown low classification errors already in the invariate tests whereas, in the *study of the AktG 1965,* the indices often comprised financial ratios which were not particularly successful in the dichotomous classification tests. In *both studies,* ratios of the capital structure frequently appeared in the best multivariate classification rules. If one compares the results of both studies and ignores the different costs of the two types of error, one again must conclude that, in the study of the AktG 1937, the percentage of total misclassifications is lower than in the study of the AktG 1965.

Using classification rules which explicitly consider the different costs of error,[30] misclassifications of future failed firms can be avoided while simultaneously, a considerable number of future nonfailed firms is correctly classified. This desirable result can be explained by an observed robustness of the linear classification rule with respect to changes in the set of cases used to derive the linear discriminant function. Com-

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[29] This (not unexpected) result questions much of the published empirical work using linear discriminant analysis. Indices comprising more than ten ratios have been proposed, for example, by Deakin, "Discriminant Analysis," p. 167; Blum, "Discriminant Analysis," p. 16; J. F. Sinkey, "A Multivariate Statistical Analysis of the Characteristics of Problem Banks," *Journal of Finance* (March 1975): 28; and Beermann, "Prognosemöglichkeiten," p. 98. The most extreme one proposed by E. I. Altman, M. Margaine, M. Schlosser, and P. Vernimmen, "Financial and Statistical Analysis for Commercial Loan Evaluation: A French Experience," *Journal of Financial and Quantitative Analysis* (March 1974) consists of forty-one (!) ratios. It should be noted that in several studies, the weights are not revealed by the authors. For example, see Blum, "Discriminant Analysis"; Sinkey, "Statistical Analysis"; and Altman, Haldeman, and Narayanan, "ZETA Analysis." This renders a critical review of these studies impossible.

[30] The values of information given in exhibit 7 assume a proportion of 11:1 of a type I versus a type II error.

Exhibit 7. Results Using Linear Discriminant Analysis

				Results of the Lachenbruch method					
				Failed corporations		Nonfailed corporations			
Year before bank-ruptcy	Financial ratio	Weight	Critical z cutoff value	Correct classified	Type I error	Correct classified	Type II error	Weighted sum of errors	Value of in-forma-tion
5	Equity/Nominal value of shares	−0.0328	k_c = −2.3251	81.82	18.18	90.91	9.09	13.64	0.00
	Monetary liabilities/Total assets	0.0519	k_c' = −4.7230	90.91	9.09	36.36	63.64	8.18	0.00
4	Monetary liabilities/Total assets	0.1021							
	Retained earnings/Total assets	−0.3871	k_c = −16.636	92.31	7.69	92.31	7.69	7.69	0.39
	Recurring revenues/Total revenues	−0.2351	k_c' = −19.034	100.00	0.00	76.90	23.10	1.15	3.85
Study of AktG 1937	Depreciation/Tangible fixed assets	0.4714							
	Current monetary assets/ Current monetary liabilities	−0.4611							
3	Monetary liabilities/Total assets	0.0982	k_c = 3.7871	92.31	7.69	84.62	15.39	11.54	0.00
	Income taxes/Average total assets	−0.1929	k_c' = 1.3892	100.00	0.00	46.15	53.85	2.31	2.69
2	Monetary liabilities/Total assets	0.0818	k_c = 2.8992	90.00	10.00	80.00	20.00	15.00	0.00
	Net cash flow from current operations/Total debt	−3.1428	k_c' = 0.4913	100.00	0.00	40.00	60.00	3.00	2.00

4		Liabilities to banks/Total debt	0.0583	k_c =	0.8371	72.00	28.00	84.00	16.00	22.00	0.00
		Cash flow/Total debt	−2.1716	k_c' =	−1.5608	100.00	0.00	8.00	92.00	4.60	0.40
3	Study of AktG 1965	Liabilities to banks/Total debt	0.0456	k_c =	0.0103	75.00	25.00	75.00	25.00	25.00	0.00
		Recurring net income/ Total assets	−0.0828	k_c =	−2.3876	100.00	0.00	14.29	85.71	4.29	0.71
		Equity/Nominal value of shares	−0.0051								
2		Income taxes/Average total assets	−0.3052	k_c =	3.3916	77.78	22.22	70.37	29.63	25.93	0.00
		Operating expenses/ Operating revenues	4.6245	k_c' =	0.9937	100.00	0.00	18.52	81.48	4.07	0.93
		Current net monetary assets/ Total assets	−0.0255								

a) Classification rules without (with) explicit recognition of different costs of misclassification are as follows:

$$Z_i = \begin{cases} \geq k_c\ (k_c') : \text{Corporation i classified as failed.} \\ < k_c\ (k_c') : \text{Corporation i classified as nonfailed.} \end{cases}$$

k_c = the cutoff value using the 1:1 proportion of error costs.
k_c' = the cutoff value using the 11:1 proportion of error costs and *should therefore not be eliminated.*

paring the results of both studies, the superiority of the results achieved in the study of the AktG 1937 must again be emphasized.

Results Using Other Multivariate Techniques

The use of linear discriminate analysis as an optimal technique for a separation of groups rests on the assumptions that the variables (financial ratios) are multivariate, normally distributed with equal group dispersion matrices across all groups. Tests on the distributional assumption, as well as tests on the equality of group dispersion matrices, provided evidence that both assumptions can seldom be maintained with respect to the data used in this study.[31]

Quadratic discriminant analysis is the appropriate technique if the group dispersion matrices are not equal. Compared with the results of the (more inappropriate) linear technique, the performance of the quadratic classification rules was poor using the Lachenbruch-holdout method. The same result was reported by Altman, Haldeman, and Narayanan who also tested linear *and* quadratic discriminant analysis on the same sets of data.[32]

Because of the rejection of the distributional assumption, *nonparametric discriminant analysis* was further tested using Kendall's technique with modifications.[33] Again, a superiority of the classification rules derived using nonparametric techniques could not be discovered. Therefore, details of these findings are not presented in this paper.

DISCUSSION OF THE RESULTS AND POLICY IMPLICATIONS

The empirical evidence of this study confirms that published financial statements of German corporations are useful for those interested in predicting failure. This result holds for financial statements prepared under the old legislation (AktG 1937) as well as for financial statements prepared under the accounting legislation of the AktG 1965. In *both studies,* univariate and multivariate classification rules were developed which, when applied to holdout cases, led to perceptibly lower expected error rates (and even to lower expected costs of misclassification) compared to the expected results of a random classification. Furthermore, successful classification rules could be derived not only from the last available financial statements before failure but also from statements prepared for more remote periods. This result implies the feasibility of designing "early warning systems" based on financial statement data for forecast horizons up to five years.

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[31] See Gebhardt, *Insolvenzprognosen,* pp. 190, 268, for details of the results of these tests.

[32] Altman, Haldeman, and Narayanan, "ZETA Analysis," p. 38.

[33] M. G. Kendall, *Multivariate Analysis* (Griffin, 1975).

The comparison of the results of the respective analyses of the 1937 and 1965 Companies Acts showed predominantly better results for the financial statements prepared under the old legislation. Because the 1965 change in the accounting legislation was almost unanimously regarded as an improvement with respect to the information content of the resulting financial statements, this result was not anticipated. The nature of the changes introduced by the 1965 Act, however, helps to explain this outcome. As outlined in the first section, the most important change was enacting less flexible valuation rules which were especially intended to reduce the degree to which assets might be undervalued. Consistent with this change is the (previously mentioned) superior performance of ratios of asset structure in the dichotomous classification test in the study of the AktG 1965. Unfortunately, financial ratios of this category do not emerge in the set of successful predictors of failure in both studies, a result consistent with the outcomes of other studies on the prediction of failure.

Profitability ratios, as well as ratios of debt-paying ability based on earnings data, make it possible — contrary to the results in the study of AktG 1937 — to yield good classification results only as late as the second year before failure in the study of the AktG 1965. The deterioration of the predictive ability of financial ratios based on earnings can also be explained by reference to the specific change in the accounting regulations. Setting only upper limits for the valuation of assets, the provisions of the AktG 1937 made it easier for corporate management to establish and dissolve "secret reserves." When, notwithstanding the possibilities afforded by such accounting regulations, a corporation was forced to give an unfavorable picture of its financial situation, the fact was a serious signal of acute impending difficulty. Since the introduction of the new valuation rules was intended to reduce flexibility, a corporation is obliged to give an unfavorable picture of its net assets (and especially of its earnings) even in temporary crises which by no means need threaten the future existence of the firm. Thus, financial statements of a corporation under the new legislation offer a less biased picture of its financial development during the fiscal years in question. However, an unfavorable report is no longer an equally reliable signal of impending difficulties which threaten the future existence of a firm.

In this research, results of two predictive ability studies using different observations have been compared. The author would have preferred to use the same failed and nonfailed firms in both studies. For such a study, it would have been necessary for the firms to have prepared financial statements according to both the new and old legisla-

tion for the *same* fiscal years. The transitional provisions prior to the implementation of the 1965 Act did not contain such an obligation. Consequently, different financial statements prepared in accordance with the different accounting regulations are not available for the same companies for the same fiscal years. To avoid an obvious bias, exactly the same principles were carefully employed in selecting the (different) failed and nonfailed corporations for both studies (AktG 1937, AktG 1965). In the light of the use of this procedure, a comparison of the results of the two studies seems justified. It may therefore be reasonably questioned whether less flexible valuation principles can always be regarded as an improvement with respect to the information needs of external users of financial statements. Since the studies attempted an analysis of the information content of financial statements of German corporations, predictions were performed using only published accounting data. If one's primary interest is with the prediction of particular events, such data restriction seems to be neither necessary nor useful. Because the studies were further restricted to an analysis of the possibilities of predicting certain events (failure or nonfailure), only one, albeit important, information objective served as starting point for an evaluation of the usefulness of German financial statements. Accordingly, comparisons of the results using financial statements prepared under alternative accounting legislation only allow a partial evaluation of the 1965 change in the accounting rules of the Companies Act with respect to the particular information objective under consideration. However, the 1965 change should not be qualified as an unsuccessful attempt given the intended objectives. Rather, the subsequent decline in the power of failure prediction might be regarded as an intended consequence of change, at the expense of lenders and creditors, of the compromise over the distribution of information among the different groups of external users.[34] But as yet, no study of the 1965 change in accounting disclosure legislation demonstrating the improved possibilities of predicting certain events (for example, future dividends, return on shares, and so on) relevant to other groups of external users of financial statements has been published.

The results of this research have important implications for the ongoing process of harmonizing internationally divergent accounting regulations and practices. First, if "usefulness" is a desired objective,

[34] See the provocative thesis implicit in the (translated) title of an article by K.-H. Forster, "From a Protection of Creditors to a Protection of Shareholdsrs — The Change in the Provisions on Valuation in the Companies Act," *Die Wirtschaftsprüfung* (August 1964): 422-29.

a priori reasoning concerned with the conceptual appeal of different accounting methods is, of course, not sufficient for an "optimal" choice. Rather, users must judge different accounting methods on the basis of the resulting financial statement data and the usefulness of these data in differentiating among firms with decision-relevant different future developments. Hence, a careful review of the effects on users of the forthcoming changes in accounting regulations in the EEC countries in the years after implementation will provide a rare opportunity for expanding empirical knowledge concerning the usefulness of different accounting methods.

The legislators should facilitate such an evaluation by designing transitional provisions in a way that requires corporations to publish financial statements according to different regulations for the same fiscal years, for example by introducing an obligation to adjust the financial statements of several previous fiscal years to the new regulations. Legislators would not only thereby facilitate the possibility of an evaluation of legislative measures, but also enable external users of financial statements to adjust the observed relations between published accounting data and future events relevant to their decisions more quickly — not merely after some years' experience — to the new accounting practice.

The provisions of the directive only require that for each balance sheet and profit and loss item, the figure relating to the corresponding item for the preceding financial year be shown. It is only at the discretion of the member states to require further that, where these figures are not comparable, the figure for the preceding financial year be adjusted. The proposed or already adopted legisltions will generally implement this provision of the directive. It is not clear, however, whether the application of the corresponding national provision will be mandatory for the first financial statements prepared under the new legislation.

In addition, it was demonstrated that changes in accounting regulations imply possible changes in the distribution of information, and thereby in wealth distribution, between users of accounting data. Therefore, accounting standard setting is basically a political process, a fact always realized in Germany because profit distributions (including income taxes) depend on the results shown in the financial statements and consequently upon the accounting methods used in their preparation. If "usefulness" to different users should really be the primary objective of accounting, "general purpose accounting" appears to be obsolete since different users can be assumed to prefer different accounting methods.

Published Interim Reports in the United Kingdom

MICHAEL MAINGOT*

INTRODUCTION

Many claim that investors need more information than is currently available to them, and that they want it made available more quickly. To meet this demand, companies provide a variety of media that managers use to communicate information concerning corporate affairs to external parties who make economic decisions. These include the annual financial reports, interim reports, press releases, and other announcements. These are some of the ways that information can travel to the investment market.

In the United Kingdom the published interim report has not been examined in the same detail as the annual financial report has been. Therefore, the following are included in this study: the historical development of interim financial reporting, a survey of previous research, an examination of the usefulness of interim reports, problems encountered in the preparation of these reports, and a survey of current disclosures for the years 1975 and 1979.

HISTORICAL DEVELOPMENT OF INTERIM FINANCIAL REPORTING

Before the 1960s, very little attention was given to interim financial reporting. It was not until the London Stock Exchange (LSE) promulgated requirements in 1964, however, that public companies gave more consideration to the question of interim financial reporting. A literature

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search revealed that one writer, as early as 1955, advocated the advantages of interim reporting to shareholders: "It provides regular information for stockholders regarding the progress of business, while the value of the investment is safeguarded from violent fluctuations in price, which might arise from a lack of regular reports on the fortunes of the company."[1]

Prior to the early 1960s, no regulations requiring the publication of interim reports existed, although the issue of quarterly and semiannual statements was encouraged in the United Kingdom.[2]

The United Kingdom is well known for specifying financial reporting requirements primarily through company law. The Companies Act 1948, 1967, and 1976 do not, however, require the publication of interim reports. Even the more recent Companies Act 1980 and 1981 have not incorporated interim reports into their disclosure requirements.

The Imperial Chemical Industries was apparently the first company in the United Kingdom to publish a semiannual report. This occurred in 1955.[3] By contrast, US Steel issued its first interim report in 1902.

Major Influences on Interim Financial Reporting Practices

As indicated earlier, the various companies acts played no role in the development of interim reporting in the United Kingdom. The British accounting profession has essentially only an indirect influence. The dominant influence, however, was that exerted by the LSE.

The LSE is the largest in the United Kingdom and, perhaps, the oldest in the world. The smaller provincial stock exchanges have joined with the LSE to form the Federation of Stock Exchanges in Great Britain and Ireland. This federation provides greater unification of activities and has developed a listing agreement to which listed companies or those wishing to become registered must comply.

Since all major companies in the United Kingdom are listed on the Stock Exchange, any requirements requesting interim reports must necessarily have far-reaching effects. The chairman of the exchange wrote in 1964 to every public company encouraging the preparation of interim reports:

> I feel sure that you have noticed in recent years a growing volume of comment and public discussion as to the amount of information being made available by public companies to their shareholders. A number of companies

[1] R. E. Tetley, "Interim Reports for Stockholders," *Accountant* (November 5, 1955): 528.

[2] R. O. Keel, "Financial Reporting and the World Economy," *Accountancy* (March 1963): 203-11.

[3] Geoffrey Holmes, "Interim Statements," *Accountancy* (September 1971): 518-22.

already give such information in annual reports and accounts and some publish quarterly or half-yearly statements. Such action has been greatly welcomed both as a contribution to the establishment of orderly markets and to the encouragement of public confidence. . . . legislation can only provide minimum requirements in the matter of statutory accounts prepared by all companies, and while recognizing that your board is in "the best position" to judge the extent to which further disclosure of information could be achieved . . . we believe that full disclosure as to the financial position of a company at the earliest time is generally beneficial.[4]

One of the main reasons for this recommendation was the conviction by the Council of the Stock Exchange, London that an

. . . interval which elapses between the issue of companies [*sic*] annual reports is, in many cases, too long a period for shareholders and the investing public to be without information, particularly when developments are taking place or trading conditions are changing.

The council also indicated that it was aware of the problems of preparing such reports. It still insisted, however, that the reports should be issued and suggested that "the risk of misinterpretation of figures can usually be avoided by the provision of further information in the form of explanatory statements wherever appropriate."[5] Therefore, in 1966, companies seeking a quotation for securities were required to prepare semiannual or interim reports. These were to be sent to the holders of securities or inserted as paid advertisements in two leading daily newspapers not later than six months from the date of the notice convening the annual general meeting of the company.

Company Law

British company law, even to the present day,[6] ignores the question of interim reporting. The Jenkins Committee, appointed in 1959 to submit recommendations for the reform of companies' law, did acknowledge the benefit of interim reports. While the committee, in its report, welcomed the practice followed by many large companies, it nevertheless "considered it unreasonable to make this a statutory obligation for every company."

The Accounting Profession

There are four professional accounting bodies in the United Kingdom which are recognized by company law. These are the Institute of Chartered Accountants in England and Wales, the Institute of Chartered Accountants of Scotland, the Institute of Chartered Accountants in

[4] "Throgmorton Street — Quiet but Firm," *Accountancy* (June 1961): 770.
[5] *Admission of Securities to Listing* (London: The Stock Exchange, 1973).
[6] These include the various U.K. Companies Acts and the European Economic Community Directives.

Ireland, and the Association of Certified and Corporate Accountants. In 1969, these four professional bodies submitted to the president of the Board of Trade[7] a memorandum which called on public companies to send interim financial statements to their members for a semiannual or other interim period. Such statements were to be distributed within four months after the end of the period to which they related and were to provide a fair view of the trading results of the company for that period.

Interestingly, the memorandum also made some recommendations regarding certain items of disclosure in interim reports:

It should contain information in summary form to give a fair view of the trading results of the company for the period to which it relates and should give corresponding figures for the equivalent previous period. If, in the opinion of the directors, the nature of the company's business makes it impracticable to give a fair view of trading results for interim periods, the directors should be required to give such other information as will, in their opinion, give a fair interim indication of the company's progress.

In addition, interim reports were recommended to indicate whether they were "audited" or "unaudited" and that it should not be a legal requirement that the interim reports be audited.

The accounting profession seemingly took an indirect approach to influence interim reporting. The intention of appealing to the Board of Trade was the hope that a later companies act would incorporate interim financial disclosure, but this has not happened.

EMPIRICAL STUDIES OF INTERIM FINANCIAL REPORTING PRACTICES

Very little evidence of any extensive empirical work in the United Kingdom which could provide a pattern of interim reporting disclosure exists. One author estimated that, in 1961, less than 4 percent of companies on the LSE produced interim reports.[8] Waldron noted that whatever interim statements were published, they tended to deal with six months' results in very simple form.[9] One should not conclude, however, that quarterly reports were never prepared. In fact, some large British companies published quarterly reports because they had been persuaded by American requirements.

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[7] This is now called the Department of Trade and Industry.

[8] Angus F. Murray, "What the Investor Wants from Company Accounts," *Accountant* (10 July 1965): 401-2.

[9] R. S. Waldron, "Quarterly Accounts for Shareholders," *Accountancy* (June 1961): 332-34.

The most comprehensive empirical study was conducted by Holmes in 1971. He surveyed the interim reporting practices of twenty-nine companies in 1970. His major findings include the following points:

1. Few companies publish quarterly reports.
2. There was little consistency concerning the information they gave or how they gave it.
3. Many did no more than publish press advertisements, mostly on grounds of cost.
4. Public companies which did send each shareholder a written report were in a minority.
5. A number of companies in the top 100 did not prepare either half-yearly or quarterly statements.
6. A large number of companies emphasized the problems of interpreting half-yearly results.
7. Data in interim reports were kept very brief.
8. None of the companies suggested that quarterly or half-yearly report figures could be used to provide moving annual totals.[10]

Another study was undertaken by Schoch for the periods 1961

Exhibit 1. Financial Disclosure in Interim Reports

	Number of Companies		
Disclosure items	1961	1966	1971
Turnover	5	11	14
Other income	1	8	11
Profit	5	15	15
Expenses			
Depreciation	2	8	10
Interest (various)	1	8	13
Tax	4	14	14
Extraordinary items	1	3	3
Operating expenses	—	1	1
Other	—	3	2
Minority interests	4	9	13
Prior year adjustments	—	3	6
Earnings per share	—	—	3
Dividend information	4	15	14
Balance sheet data	—	—	—
Source and application of funds statement data	—	—	—
Reference to internal budget	—	—	—
Financial notes	1	7	8

Source: Herbert Paul Schoch, "A Comparative Study of Selected Reporting Practices in Four Countries" (Ph.D. thesis, The American University, 1974), p. 166.

[10] Geoffrey Holmes, "Interim Statements," *Accountancy* (September 1971): 518-22.

through 1971, using only sixteen survey companies from the United Kingdom.[11] The results are presented in exhibit 1.

Since the introduction of the U.K. Companies Act 1948, consolidated or group accounts became a requirement in financial disclosure where a parent and subsidiary company relationship existed. Schoch found that the applicability of this requirement intended for annual accounts also found its way to interim reports. The majority of survey companies indicated, in one way or another, that consolidated interim results were being published. Only one company in 1961, three in 1966, and two in 1971 failed to give any indication whether interim results were presented on a consolidated basis.

While these two surveys have provided useful information on the state of interim reporting, the samples of companies in both studies were too small to prove conclusive findings.

USEFULNESS OF INTERIM REPORTS

One major objective of published financial reports is to provide information which will enable investors to allocate their resources to the most desirable alternatives. Since investors use information other than that provided in the financial statements in making investment decisions, it is difficult to determine the exact effects that accounting information has on these decisions. Most decisions to purchase securities are based upon expectations of future performance, and the appropriateness of such decisions is evaluated based on actual future performance. While it might be difficult to measure the precise effects of a given set of financial statements on investment decisions, little doubt appears to exist that these statements do affect the investment decisions.[12]

The value of interim financial reports is that they report on the activities of the firm for a period of less than a year. They provide authoritative information to users of these reports and keep shareholders closely informed on what is happening within their companies. In so doing, management is helping to stabilize stock market fluctuations and also to increase the marketability of the securities.[13] There are also advantages to management since periodic reporting improves shareholder relations as shareholders get to know their companies better.[14]

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[11] Herbert Paul Schoch, "A Comparative Study of Selected Reporting Practices in Four Countries" (Ph.D. thesis, The American University, 1974).

[12] Gale E. Newell, "Is Quarterly Financial Data Adequate for Investment Decision Making," *Financial Analyst Journal* (November-December 1969): 39-43.

[13] Frank S. Capon, "The Need for Interim Statements," *Canadian Chartered Accountant* (October 1955): 277-82.

[14] Ibid., p. 278.

Therefore, it is crucial that interim financial reports be issued as soon as possible after the close of a fiscal period in order to give users of these data time to assess whatever judgments they may have made regarding investments in the company.

As well as these advantages, certain disadvantages must be mentioned:

1. Seasonal fluctuations can cause amounts for one period to be misleading unless care is taken to explain the seasonal factors.[15]
2. Information is provided to competitors.[16] Most managements claim that their regular information sources provide them with relatively accurate estimates of the results of competitors from month to month or from period to period. Therefore, they must assume that competitors have equally good sources of information and know all that they need to know regarding the results of each company in the industry.[17] In addition, government statistics have been so well developed that there are few real "secrets" from competitors for any length of time.
3. The cost of preparing interim statements can no longer be used as an argument against publishing them.

Therefore, when one considers the advantages and the disadvantages, the case for reporting on an interim basis far outweighs the disadvantages of not doing so.

SOME PROBLEMS IN THE PREPARATION OF INTERIM REPORTS

Much attention has been devoted to the objectives of annual reports. Financial reporting developed logically over the centuries to accommodate an annual report. The main problem has been the attempt to resolve the problems of interim reporting by treating it as a "little annual report." This approach falls short because of the peculiar nature of interim reports.[18] Very few formal studies of the objectives of interim reports existed until recently. Since 1964, however, a few re-

[15] David Green, Jr., "Toward a Theory of Interim Reports," *Journal of Accounting Research* (Spring 1964): 35-49. Also Gordon Shillinglaw, "Concepts Underlying Interim Financial Statements," *Accounting Review* (April 1961): 222-31.

[16] Capon, "Interim Statements," 277-82.

[17] Some good arguments on eliminating ignorance and preventing insider profits can be found in the following articles: George J. Stigler, "The Economics of Information," *Journal of Political Economy* (June 1961), and J. F. Jaffe, "The Effect of Regulation Changes on Insider Trading," *Bell Journal of Economics and Management Science* (1974): 93-121.

[18] Todd L. Johnson and Nancy L. Johnson, "Interim Reporting — Redefining the Problem," *Financial Executive* (May 1979): 31-36.

searchers, [19] mainly in the United States, have made some inquiries into the theory and practice of interim reporting to external users.

Presently, academic and professional accountants do not agree as to the interim reporting model which can be generally adopted. This should not be surprising because of the recent attention given to the subject. There are three general approaches to interim reporting.

1. The discrete approach is one in which income for an interim period is treated as a distinct period and very little is done to adjust an interim report to an annual basis. This model has received little theoretical support on the grounds that it may incorporate nonrecurring revenues or costs that distort the interim income results.[20]
2. The disclosure approach maintains that basing all reports on the year and its major subdivisions has tended to make accounting arbitrary. Therefore, the concept of interim or annual reporting might be re-examined in favor of other types of reporting patterns. This radical departure from conventional reporting has received support in the literature.[21]
3. The predictive approach proposes that annual costs be allocated to interim periods either on a time basis or on volume. There are, however, mixed feelings regarding the usefulness of this model.[22]

No consensus exists as to other concerns that are also mentioned. The first are those which arise from items which may be known precisely at the end of the year for the annual accounts, but which during the year must be estimated. These include charitable contributions, property taxes, income taxes, bonuses (so-called annualized expenses), and so on.

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[19] Green, "Interim Reports," 35-49; Alfred Rappaport, "Toward a Theory of Interim Reports: Modification and Extension," *Journal of Accounting Research* (Spring 1966): 121-26; James W. Edwards, Geraldine Dominiak, and Thomas Hedges, *Interim Financial Reporting* (New York: National Association of Accountants, 1972).

[20] William J. Bollom and Jerry J. Weygandt, "An Examination of Some Interim Reporting Theories for a Seasonal Business," *Accounting Review* (January 1972): 75-84.

[21] Charles A. Nickerson, Larry Gene Pointer, and Robert H. Strawser, "Attitudes of Financial Executives toward Interim Financial Statements," *CPA Journal* (March 1975): 21-25.

[22] David Green, Jr. and Joel Segall, "The Predictive Power of First Quarter Earnings Reports," *Journal of Business* (January 1967): 44-55, and idem, "The Predictive Power of First Quarter Earnings Report: A Replication," *Empirical Research in Accounting — Selected Studies* (1966): 21-36; see also Phillip Brown and Victor Niederhoffer, "The Predictive Content of Quarterly Earnings," *Journal of Business* (October 1968): 488-97; and Victor Niederhoffer, "The Predictive Content of First Quarter Earnings Reports," *Journal of Business* (January 1970): 60-62.

Estimates and assumptions, which cannot possibly be accurate, must be made when preparing these reports. Adjustments must be made because of differences between book records and physical count of inventory and adjustments from cost to market. Further complications arise, depending on the methods of inventory valuation (LIFO, FIFO, and so forth). Seasonality is also a problem, but this was discussed earlier.

Interim income measurement appears to be the most significant problem. The same problems are also present in the computation of annual income, except that, with interim reports, estimates are made for shorter durations. This is an area where further reseach is needed.

U.K. SURVEY OF INTERIM DISCLOSURES FOR YEARS 1975 AND 1979

Sample Selection Procedures

A random sample of 100 firms was selected from among all industrial firms whose ordinary (common) shares were quoted on the LSE throughout the years 1975 to 1979. The companies in the sample were exclusively industrial as classified in the share price data section of *The Times* newspaper. This meant that several other types of companies, which were also listed, had to be excluded from the sample. Among these were British funds, Commonwealth and African stocks, corporation stocks, foreign stocks, dollar stocks, banks, discount houses and hire purchase, buildings and cinemas, insurance, investment trusts, mining, plantation and tobacco, and property and shipping.

Letters requesting either copies of the interim reports for 1975 and 1979 or information concerning the journals and newspapers where press advertisements appeared were mailed to the various company secretaries. Second letters were sent to nonrespondent companies. In addition, microfilm editions of *The Times* and *The Daily Telegraph* were examined on a daily basis for the two years to locate advertised interim reports to augment the supply sent directly to the researcher. There were finally thirty-seven usable companies for 1975 and forty-three for 1979. While these numbers are not very large, they were, nevertheless, an improvement over the number of companies analyzed in the two previous studies by Holmes and Schoch.

Disclosure

Disclosure of interim reports tended to be guided by the minimum information prescribed by the LSE. These are given here.

1. Group turnover;
2. Group profit (or loss) after all charges, including taxation;

3. U.K. and, where material, overseas taxation charged in arriving at point 2;
4. Amount of point 2 attributable to members of holding company, that is, after deduction of outside interests;
5. If material, extent to which point 2 has been affected by special credits (including transfers from reserves) and/or debits,
6. Rates of dividend(s) of holding company paid and proposed and amounts absorbed thereby;
7. Regarding any year or other full accounting period, earnings per share expressed as pence per share;
8. Comparative figures of points 1 to 7 inclusive for the corresponding previous period; and
9. Any supplementary information which, in the opinion of the directors, is necessary for a reasonable appreciation of the results or of other material changes in the aggregate of the balances on profit and loss account and other reserves of the group.

These disclosure items were summarized in the recent study by the Accountants International Study Group.[23] The analysis of the data in this survey can be conveniently divided into three sections for discussion purposes: financial information, notes to the financial information, and ancillary information, that is, dates of interim periods announcement, and time elapsing between dates of interim periods, and announcement dates.

Financial Information

Exhibit 2 presents a detailed analysis of the sample interim reports for the years 1975 and 1979. There did not seem to be striking differences in the disclosures. One common feature was that in both years, the companies adhered to the minimum disclosure information prescribed by the LSE.

Specifically, few expense items were disclosed. The number of companies providing information on depreciation had declined. Only one company gave information on director's remuneration and lease and rental of equipment.[24]

Extraordinary items declined, but in both years, these referred mainly to changes in accounting policies. More companies provided earnings per share (EPS) figures in 1979. Only four companies separated basic from diluted EPS, however.

[23] This research was conducted in 1975 by the study group consisting of Canada, the United Kingdom, and the United States.
[24] Disclosure of these items is required under the Companies Act 1967.

Exhibit 2. Financial Disclosure in Interim Reports

Disclosure items	Number of companies 1975 n = 37	1979 n = 43
Turnover (Sales)	37	43
Segmented sales data	5	12
Geographical	3	7
Industry	2	5
Sales		
Six months	37	43
Comparative six months	35	43
Previous annual	23	36
Investment income	4	1
Profit	37	43
Profit by segments	1	—
Depreciation	11	8
Directors' remuneration and pension fund	1	1
Lease and rental of equipment	1	1
Interest paid	23	22
Earnings before taxation	37	43
Estimated taxation	37	43
Earnings after tax	37	43
Dividend information	37	43
Minority interest in profits	18	19
Associated companies' interest in profits	9	15
Extraordinary items	13	11
Profit retentions	9	17
Earnings per share	23	35
Basic	4	4
Diluted	4	4
Other data		
Source and application of funds	—	—
Balance sheet	1	2
Net tangible assets	1	—
Share capital and reserves	2	2
Fixed asset expenditure	1	1
Regional and development grants	2	—
Exchange differences	2	2

There appeared to be no trend in the disclosure of share capital and reserves, regional and development grants, and exchange differences. No company prepared a source and application of funds statement. Nevertheless, one company in 1975 and two companies in 1979 provided consolidated balance sheets,[25] while all companies consolidated their income statements.

[25] In the United States, Accounting Series Release No. 177 expands Form 10-Q quarterly reports for quarters beginning after December 25, 1975. The new rules now require balance sheets, income statements, statement of changes in

Exhibit 3. Analysis of Notes to the Interim Reports

	Number of companies	
Disclosure items	1975 n = 37	1979 n = 43
Statements unaudited	30	34
Turnover (sales) and forecast	34	43
By geography	7	18
By product lines	30	21
Depreciation	2	4
Bank interest	1	5
Interest forecast	—	4
Extraordinary items	9	9
Prior period adjustments	2	7
Current cost accounting profit	1	1
Foreign currency translation		
Rate	—	5
Gain	—	—
Loss	2	4
Taxation information	14	16
Rate of estimated taxation	12	8
Dividend information	30	37
Increase	21	31
Decrease	—	—
Same as last period	7	6
No dividend this period	1	1
How earnings per share calculated	7	7
Contingent liability	1	1
Summary of subsidiaries' profit statement	1	—
Acquisition of assets	4	4
Disposal of assets	—	2
Chairman available to answer questions on interim reports	1	2
Balance sheet	—	—
Sources and applications of funds	—	—

Notes to the Financial Information

The notes to the financial statements are regarded as an integral part of the reporting process. Analysis of the individual items are presented in exhibit 3. What is particularly significant is the variety of information exemplified in these notes.

financial position, and management's narrative analysis of the results of operations. See Dennis R. Beresford and John E. Rutzler, "A Survey of the New Look to Quarterly Reporting," *Financial Executive* (September 1976): 38-50. The United Kingdom does not require these yet. It is understood that interim reports are on the agenda of proposed "exposure drafts."

Seven companies in 1975 and nine companies in 1979 did not state that the interim reports were unaudited.[26] All companies discussed their sales in 1979, compared with only thirty-four in 1975. In addition, the chairpersons of the companies gave some indications concerning the trends of sales in the next year in very general terms. Most of the sales were segmented on geographical and product line bases.

Few expense items were explained in the notes, and those reflected the financial information. No company indicated the methods used in computing depreciation. Comparing the two years, one could not find a definite pattern of increased disclosure in the latter year. The frequency of the items reported, however, suggests more disclosure in 1979.

The majority of reports gave dividend information. This was further analyzed to inform readers of changes in the dividend position from the previous year. The trend appeared to be an increase in the dividend paid. Only seven companies gave the bases on which EPS were calculated. Finally, no discussion centered on the areas of sources and applications of funds. Nor were comments made regarding the balance sheets.

Ancillary Information

This information was incidental to the information discussed earlier. Some important points were revealed earlier, however. (See exhibits 4, 5, and 6.)

1. The interim reporting periods were concentrated in May, June, September, and October.
2. While there was an even flow of announcement dates, the majority of companies favored September and October.
3. No company released its information before week six in 1975. In 1979, however, information became available by week four. By week twelve, over 80 percent of the interim reports were made available to users and potential users of the data.

[26] While these reports in the United Kingdom are generally unaudited, it is usually the practice in the United States for the auditors to see these reports and make appropriate comments before the interim reports are released to the public. This procedure is very similar to the review procedure suggested by Coopers & Lybrand in the United States. See Philip L. Defliese, "New Era for Auditors: Interim Reports," *Financial Executive* (December 1974): 22-32. Auditing procedures, both in the United Kingdom and United States, to meet the demands of interim reports, need to be developed, since the annual auditing procedures do not appear to be suitable.

Exhibit 4. Distribution of Interim Accounting Periods

Month	1975 Relative frequency	1975 Cumulative frequency	1979 Relative frequency	1979 Cumulative frequency
January	0.00	0.00	0.00	0.00
February	2.70	2.70	4.60	4.60
March	0.00	2.70	4.60	9.20
April	2.70	5.40	2.30	11.50
May	10.80	16.20	7.90	19.40
June	45.90	62.10	46.00	65.40
July	2.70	64.80	2.30	67.70
August	2.70	67.50	2.30	70.00
September	16.20	83.70	18.50	88.50
October	13.60	97.30	9.20	97.70
November	0.00	97.30	0.00	97.70
December	2.70	100.00	2.30	100.00
	100.00		100.00	

Exhibit 5. Distribution of Interim Earnings Announcement Dates

Month	1975	1979
	Percentage of times reports announced	
January	8.1	6.9
February	0.0	2.3
March	5.4	2.3
April	5.4	4.6
May	8.1	4.6
June	5.4	9.2
July	0.0	0.0
August	5.4	4.6
September	32.4	31.0
October	16.2	18.4
November	2.8	9.2
December	10.8	6.9
	100.00	100.00

Recent Developments in the United Kingdom

Under section II (6), Companies Act 1981, when a company publishes abridged accounts, they must be accompanied by a statement indicating that the accounts are not full accounts, that complete accounts have been delivered to the registrar of companies, that the auditors have reported on the accounts prepared for the members, and that the report was unqualified.[27] Whether interim reports constitute abridged accounts is not clear.

[27] Reports and Accounts, *Accountancy* (October 1982): 18.

Exhibit 6. Number of Weeks Elapsing between Interim Dates and Announcement Dates

Numbers of weeks	1975 Percentage	1975 Cumulative Percentage	1979 Percentage	1979 Cumulative Percentage
Less than 4	0.0	0.0	0.0	0.0
4	0.0	0.0	2.3	2.3
5	0.0	0.0	4.6	6.9
6	8.1	8.1	16.1	23.0
7	10.8	18.9	6.9	29.9
8	10.8	29.7	6.9	36.8
9	8.1	37.8	4.6	41.4
10	18.9	56.7	23.0	64.4
11	16.3	73.0	14.9	79.3
12	8.1	81.1	4.6	83.9
13	5.4	86.5	2.3	86.2
14	0.0	86.5	4.6	90.8
15	5.4	91.9	2.3	93.1
16	2.7	94.6	4.6	97.7
17	2.7	97.3	0.0	97.7
18	0.0	97.3	2.3	100.0
19	0.0	97.3	0.0	100.0
20	0.0	97.3	0.0	100.0
More than 20	2.7	100,0	0.0	100.0
	100.0		100.0	

More recently, the Accountancy Standards Committee (ASC) in the United Kingdom issued "Draft Guidance Notes: CCA in Interim Reports."[28] The London Stock Exchange has for many years required that listed companies prepare half-yearly interim reports. In February 1981, the LSE wrote a letter to all listed companies stating that they would be required to provide current cost information in interim reports as soon as they had two years' experience in producing annual current cost figures. This means that current cost information must be disclosed in all interim reports covering half-yearly periods ending on or after June 30, 1982.

The ASC has given some guidance in the preparation of current cost in interim reports and also listed the current cost accounting information to be disclosed.

Developments in Canada and the United States

Canada. In late 1959, the Toronto and Montreal stock exchanges encouraged their listed companies to publish interim reports. By 1960,

[28] Accountancy Standards Committee, "Draft Guidance Notes: CCA in Interim Reports, *Accountancy* (July 1982): 100-6.

only approximately one-quarter of Canadian public companies adhered to this practice.[29] The Canadian Institute of Chartered Accountants (CICA) and the Toronto Society of Financial Analysts urged that greater consideration be given to the publication of quarterly or semiannual reports. The CICA recognized the increase in distribution of interim reports to shareholders as required by Canada's largest stock exchange, the Toronto Stock Exchange, and the Securities Act (Ontario) 1966. The Accounting and Auditing Research Committee of the CICA studied interim reporting and in February 1971 circulated to its members an exposure draft on interim financial reporting to shareholders. In October 1971, a research recommendation was published for inclusion in the CICA Handbook. The recommendations became effective for interim reports commencing on or after November 1971. Thus, the accounting profession in Canada became the first country among the United Kingdom, Canada, and the United States to issue guidelines on interim reporting to shareholders.

The United States. The New York Stock Exchange (NYSE) has been a dominant influence since 1910 in advocating the publication of interim reports. The American Stock Exchange introduced interim reporting requirements in 1962. While the two stock exchanges have been instrumental in getting more companies to publish interim reports, their requirements for disclosure have been minimal. The NYSE took a fresh look at interim reporting, and, in a white paper on financial reporting issued in 1973, required all listed companies to mail quarterly reports to shareholders, particularly for the first three quarters.[30]

The Securities and Exchange Commission (SEC) was empowered by the Securities Exchange Act of 1934 to obtain quarterly reports. It did not do so, however, until 1945. From 1946 to 1953, it required filing of quarterly sales and gross revenue with the commission. In 1953, the commission rescinded the requirement for filing of quarterly sales information. By 1955, under pressure from some quarters, the SEC required filing semiannual reports (9K) with it. This prevailed until 1970 when a major change occurred. The Wheat Report[31] proposed quarterly reporting on Form 10-Q. This has continued since that time, but recently, the SEC has revised the form and the new 10-Q is effec-

[29] "The Value of Interim Statements," *The Canadian Chartered Accountant* (November 1960): 279.

[30] The New York Stock Exchange, "Recommendations and Comments on Financial Reporting and Related Matters, A White Paper" (New York: NYSE, 1973), pp. 7-8.

[31] Francis Wheat, *Disclosure to Investors* (The Wheat Report) (Chicago: CCH Inc., 1967).

tive for interim periods subsequent to the end of the fiscal years ended after December 15, 1980.[32]

The American Institute of Certified Public Accountants appears to have ignored interim reporting until 1973, when it issued an exposure draft of a proposed opinion on "Interim Financial Reporting." In June 1973, Opinion 28, "Interim Financial Reporting" became effective. This established standards for determining interim financial information and describes the minimum required disclosures of interim financial data.

CONCLUSIONS

The subject of interim financial reporting deserves the attention of all publicly held companies. While it has received the support and interest of the London Stock Exchange, the time has come that it should receive attention by the accounting profession in the United Kingdom in a more direct way. Since the United Kingdom is well known for specifying disclosure through company law, a statutory requirement for the publication of interim reports could be introduced. Before this could be achieved, however, it would be necessary for the British accounting profession to undertake a comprehensive study of the subject.[33] The Corporate Report[34] recognized that "corporate reports should be timely and presented frequently and regularly" since evidence suggests that interim reports exert a considerable influence on investors.[35]

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[32] SEC Commentary, *CPA* (May 1981): 64-66.

[33] It could build on recent studies conducted in the United States and, to some extent, Canada.

[34] The Corporate Report, *Accounting Standards Steering Committee* (London: the Institute of Chartered Accountants in England and Wales, 1975).

[35] Robert G. May, "The Influence of Quarterly Earnings Announcements on Investor Decisions as Reflected in Common Stock Price Changes," *Empirical Research in Accounting* (1971): 119-63. This article reflects the U.S. position. For a U.K. study, see M. M. Maingot, "The Influence of Interim Earnings Announcements on Investor Decisions as Reflected in Ordinary Share Prices in the United Kingdom" (Ph.D. thesis, Queen's University of Belfast, 1981).

Corporate Social Reporting in India

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The social responsibility of businesses has attracted the attention of numerous interest groups. The proponents of social responsibility suggest that business firms exist and function in a societty and have a moral obligation to solve social and environmental problems. The opponents of social responsibility argue that the business of a business is to earn profit and leave the welfare of society to social workers and government agencies.

Whatever may be the argument, society expects business firms to work actively for national goals and for the broader interests of society as a whole. This expectation is quite common in the case of public sector enterprises whose main goal is not merely to earn profits, but also to work for the welfare of society.

The broad objective of this study is to examine the extent of disclosure of social responsibility in the corporate annual reports and to analyze the relationship between different organizational correlates (namely, age, total assets, net sales, rate of return, profitability, and type of industry) and disclosure of social responsibility. The basic assumption for selecting annual reports is that what a company does as a part of its social responsibility is communicated through its annual reports.[1]

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[1] There are many media, such as newspaper, house journals, conferences, seminars, and so on, through which a company may inform the public of its various activities of social responsibility. Among these, the most common medium for disclosure of information is the annual report.

HYPOTHESIS OF THE STUDY

On the basis of these objectives, the following null hypotheses (H_o) were formulated regarding the disclosure of social responsibility in public sector enterprises:

H_{o1} There is no significant difference regarding the disclosure of social responsibility items among public sector enterprises.

H_{o2} The awareness of their social responsibility is no different for older or younger companies.

H_{o3} Size of a company (total assets) has no relationship to disclosure of social responsibility awareness.

H_{o4} Profitability does not influence the disclosure of social responsibility.

H_{o5} The nature of an industry does not influence its social responsibility awareness.

REVIEW OF LITERATURE

There are few empirical studies concerning the disclosure of social responsibility in the annual reports of Indian companies. A few research studies have, however, been conducted on the quality of this disclosure in other foreign countries. A brief review of these studies and other quantitative and descriptive literature on social responsibility would help to understand the disclosure practices and to identify the important social responsibility variables which may be useful in the preparation of an index of social responsibility items.

Donom, Ryam, and Baker conducted a survey of midwest stockholders and found that 265 of 303 (87.4 percent) stockholders agreed that they should support their corporation when it voluntarily spends more funds in environmental controls than regulations demand. A majority agreed that social responsibility and income should be equal goals, although this means accepting a lower rate of return on their investment. The same respondents were, however, in favor of extended social responsibility in hiring blacks or women for managerial positions.[2]

Clark found that the activities in environmental control by business are currently being reported in three places in annual reports (the president's letter to the stockholders in the annual reports; the text of these reports or other documents, but not as a part of the financial

[2] Donom, Ryam, and Baker, "Social Responsibility: Contemporary Stockholder Values and Corporate Log," *Proceedings of the Annual Mid-West Management Conference* (Madison: University of Wisconsin, 1972).

statements; and in the financial statements or in the footnotes or other supplementary materials included as a part of the report.)[3]

In his project on accounting for pollution cost, Norman Pope studied 125 and 136 annual reports for 1969 and 1970, respectively. These reports were selected from five industries alleged to be the heaviest polluters: chemicals, energy, forestry and packaging, metals, and utilities. He found that most of the 261 annual reports included descriptive information on ecology in the president's letter to the stockholders or in the body of document, but only 18 (6.9 percent) disclosed such information in the financial statement or in the related footnotes — usually in reference to contingent liabilities related to commitments under regulatory requirements.[4]

According to a 1971 U.S. report, pollution control expenditures vary from 3.5 percent of total capital investment for individual companies to 10 percent in some cases. According to Bylinski, expenditures have been reported to run as high as 25 percent of total capital investment in the steel industry.[5] Williams *et al.* observed the trends of financial reporting of pollution control costs between 1969 and 1970.[6] The study indicates that slightly over one-half of 261 annual reports included this reference in the letters to the shareholders.

Dilley's study reveals that external reporting of some performance of social responsibility in corporate annual reports in the United States is becoming widespread, largely due to public and regulatory pressures.[7] These disclosures are found primarily in the letter to shareholders and in separately labeled sections of the annual report. Disclosures are made in terms of dollars, other quantitative information, narrative statements, or some combination of all three.

In his study of eighteen U.S. firms in the pulp and paper industry for the years 1967/71 and 1971/73, Spicer concluded that, on the basis of their annual reports, the most profitable, larger companies tend to have the best pollution control records and, in general, were judged by the investors to be less risky in terms of both total and systematic risk. In addition, these companies were awarded generally higher price-

[3] E. C. Clark, "Environmental Data and Financial Reporting," *Chartered Accountant* (October 1973).

[4] Norman Pope, "Accounting for Pollution Cost" (Master's diss.).

[5] Gene Bylinsky, "The Mounting Bill for Pollution Control," *Fortune* (July 1976).

[6] D. A. Williams, C. C. Jones, and E. N. Belverd, "Reporting on Pollution Control Costs in Annual Reports" (Texas Tech University, May 1972).

[7] Steven C. Dilley, "External Reporting of Social Responsibility," *Michigan State University Business Topics* (Autumn 1975): 13-26.

earnings ratios than companies with poorer pollution control records.[8]

Narain conducted a study of fifty-seven annual reports of public enterprises in India and concluded that public sector enterprises do not seem to bear in mind fully the requirements of the average readers or their own responsibility to the public at large.[9]

In their research project, Singh and Gupta attempted to identify the association between organizational correlates and the quality of disclosure in public and private sector companies. The main findings were that the public sector companies disclosed more information than did private sector companies, and among the private sector, concerned foreign subsidiaries disclosed more information than Indian public companies. The number of shareholders, age, and organizational pattern had significant influence on the quality of disclosure, whereas earning margins, profitability, size, and auditing firm do not affect the quality of disclosure.[10] Singh and Bhargava conducted a study on the quality of disclosure in public enterpirses in India.[11] The quality of disclosure varies from enterprise to enterprise. The organizational pattern of these enterprises is not associated with the quality of disclosure. The quality of disclosure is, however, related to the nature of industry at the lower level of confidence. These two studies discuss financial disclosure but do not examine the disclosure of social responsibility in the annual reports of public sector enterprises.

An analysis of the previous discussion would show that there have been a few studies conducted in the United States regarding the disclosure of social responsibility. Indian studies are mainly related to the examination of the relationships between the organizational correlates and quality of general disclosure. The present study attempts to analyze the disclosure of social responsibility information in the annual reports of public sector undertakings and to examine the impact of organizational correlates on such disclosures.

RESEARCH METHODOLOGY

The research methodology deals with the selection of a sample, construction of the index of disclosure, and assignment of weights to different items of the index.

[8] Barry H. Spier, "Investors, Corporate Social Performance and Information Disclosure: An Empirical Study," *Accounting Review* (January 1971).

[9] Laxami Narain, *Public Enterprises in India* (New Delhi: S. Chand, 1973).

[10] D. R. Singh and B. N. Gupta, "Quality of Disclosure in Indian Companies," *Indian Journal of Accounting* (June-December 1977).

[11] D. R. Singh and S. K. Bhargava, "Quality of Disclosure in the Public Sector Enterprises," *Vikalpa* (October 1978).

SELECTION OF THE SAMPLE

A circular-type letter was mailed to seventy-seven public sector undertakings in 1977 requesting them to send a copy of their annual report for the year 1975/76. Forty-two firms (55.97 percent) responded. Annual reports of two concerns (Indian Dairy Corporation and National Dairy Development Board) could not be used because their systems of disclosure of financial results was not consistent with other companies. Thus, annual reports of forty companies were used in the present study. All of the companies were classified according to different organizational correlates selected for the study.[12] These enterprises represent a cross-sectional view of the total population (exhibit 1).

CONSTRUCTION OF INDEX OF DISCLOSURE

By consulting foreign and Indian journals, annual reports of private and public sector companies, and by considering suggestions by financial, environmental, and economic experts, a comprehensive list of disclosable items relating to social responsibility was prepared. Since not all items are of equal importance, each item is assigned a weight ranging from 1 to 5 denoting its relative importance. The weights of 1.5, 2.5, 3.5, and 4.5 are also given to indicate varying degrees of intermediate importance. It may be emphasized, however, that there is no linear relationship between weights and importance of items. An item with a weight of 5 is not exactly five times more important than an item with a weight of 1. Weights are assigned more or less subjectively and differ from person to person. The weights of 1.5, 2.0, 2.5, and 3.0 were assigned to fourteen, six, four, and three items, respectively. Of the weights, 3.5 and 4.0 were given to two and one items, respectively. The maximum and minimum weights of 5 and 1 were given to two items in each case. In all, thirty-three items with a total weight of 72 have been included in this study. The details have been provided in exhibit 2.

Of the thirty-three items, twenty-six (78.7 percent) were given weights equal to or less than 2.5. Only seven (21.3 percent) were given weight above 2.5. The weights of 3.0 and above were given to those items which require a heavy investment (townships, educational institutions, hospitals, canteens, transportation, environmental control, and such). More weights were assigned to these items because heavy investment in them may not permit many enterprises to involve themselves in other social affairs. The various items of index of disclosure and their respective weights are given in the Appendix.

[12] The form of organization (government company and public corporation) could not be used due to the small number of the sample in the public corporation category.

Exhibit 1. Profile of Public Enterprises

Age	
Below 10	14
10-20	15
Above 20	10
Size	
Total assets (in Lakhs)	
Below Rs 5,000	20
Rs 5,000-10,000	7
Above Rs 10,000	13
Net sales (in Lakhs)	
Below Rs 1,500	20
Rs 1,500-3,000	7
Rs 3,000-4,500	3
Above Rs 4,500	9
Profitability	
Rate of Return (%)	
0-5	9
5-10	4
10-15	4
Above 15	6
Earning margin (%)	
0-5	14
5-10	9
Above 10	4
Nature of Industry	
Manufacturing industry	
Capital goods[1]	9
Consumer goods and agro-based products[2]	5
Basic materials[3]	15
Service industry	
Trading and transportation	7
Contract construction and development on small scale	3
Financial rehabilitation	1

[1] Few enterprises were not earning profit.
[2] The age of one firm could not be located.
[3] One enterprise was engaged in rehabilitation work.

LIMITATIONS OF THE STUDY

The present study has several limitations. First, the research findings are based on annual reports of public sector enterprises for the year 1975/76. The study does not include banks and financial institutions. The generalizations are therefore limited to manufacturing and service enterprises.

Exhibit 2. Number of Items and Their Weights

Weight	Number of items	Total weight
1.0	2	2.0
1.5	14	21.0
2.0	6	12.0
2.5	4	10.0
3.0	2	6.0
3.5	2	7.0
4.0	1	4.0
5.0	2	10.0
	33	72.0

Next, expenditure on social overhead has not been considered in assigning weights to each item because not all items can be expressed in monetary terms. The system of weights as given in the "Index of Social Responsibility Disclosures" is highly subjective and may differ from person to person and from time to time. Moreover, the nature of the activity of a company may influence the total score of social responsibility.

Organizational correlates have been assumed to be independent of each other, which may not be true in many cases.

ANALYSIS AND INTERPRETATION

During the course of evaluation of the annual reports, it was observed that information regarding social responsibility is given in different parts of the report, such as chairman's statement, director's report, year at a glance, balance sheet, profit and loss statement, separate schedules,[13] footnotes, photographs,[14] and so on. Due to this, the annual reports were thoroughly checked in order to identify the different items of social responsibility.

The analysis of the data collected from the annual reports of the sample companies is divided into two parts. The first part describes the overall disclosure of social responsibility in public sector companies. The impact of organizational correlates on the disclosure of social responsibility will be examined later.

[13] It was observed that of forty sample companies, twenty-four (60 percent) gave a separate schedule on social overhead expenditures. This schedule gives information mainly on township, educational institutions, hospitals, and such.

[14] In a few annual reports, the social awareness was projected through photographs.

Exhibit 4. Percentage Disclosure and Number of Companies in Each Category

Percent of information disclosed	Number of companies (N = 40)	Percentage of companies
0-10	2	5.0
10.1-20	9	22.5
20.1-30	12	30.0
30.1-40	8	20.0
40.1-50	6	15.0
Above 50	3	7.5

Since the calculated value of skewness (0.013) is less than the tabulated value (0.10), an insignificant skewness is present. The calculated value of kurtosis (2.24) is between 3.0 and the tabulated value at the lower limit; thus, the kurtosis is not significant in the series. From the tests of kurtosis and skewness, it can be interpreted that the series is normally distributed. The ordinates of a normal curve fitted to the data of exhibit 4 are shown in exhibit 5.

Exhibit 5. Ordinates of the Normal Curve (Fitted to Data of Exhibit 4)

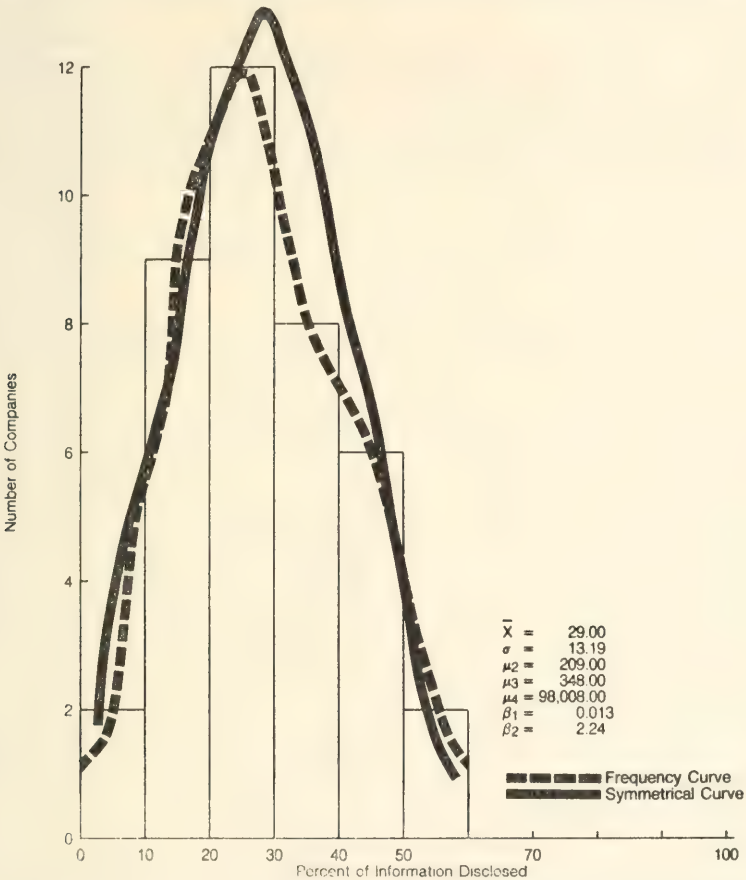
X	$d = X - X$	d/σ	$2.71828^{-d^2/2\sigma^2}$	(Col. $4^{Y c}$ X Y_0)
1	2	3	4	5
5	−24	−1.82	0.3166	4.11
15	−14	−1.06	0.5701	7.40
25	−4	−3.03	0.9550	12.39
29	0	0	1	12.98
35	6	0.45	0.9036	11.72
45	16	1.21	0.4808	6.24
55	26	1.97	0.1436	1.86

Mean ($\bar{X}$) = 29.0
S.D. (σ) = 13.19
Y_0 = 12.98

The data generated in column 5 of exhibit 5 have been plotted in exhibit 6 to show the frequency curve (solid line) and the symmetrical curve (broken line).

The analysis of the normal curve reveals that not all the public sector companies disclose similar information regarding the awareness

Exhibit 6. Frequency and Symmetrical Curves



of social responsibility. Some companies disclose more information than the others. On the basis of this discussion, the null hypothesis (H_{01}) is rejected. It may be concluded that public sector enterprises do not disclose similar information of social responsibility in their annual reports.

SOCIAL RESPONSIBILITY AND ORGANIZATIONAL CORRELATES

A concern's awareness of social responsibility as seen through its disclosure and the relationship of social responsibility to organizational

characteristics, such as age, size, profitability, and nature of industry, are tested in this part.

Age

There is a general idea that a well-established company may be more involved in social responsibility than a young, newly established concern would be. To test the relationship between disclosure of social responsibility and the age of a company, the following hypothesis is formulated.

H_{o2}: The awareness of their social responsibility is no different for older or younger companies.

The mean score, standard deviation, and rank correlation coefficient of different categories are presented in exhibit 7.

Exhibit 7. Age and Social Responsibility Score

Age (in years)	No. of companies (N = 39)	$\bar{X}$	σ	rs*
Less than 10	14	18.39	9.44	0.21
10 to 20	15	22.80	8.77	0.14
Above 20	10	24.07	10.19	−0.72

*rs = +0.28, t value = 1.775, d.f. = 37
Table value = 2.704 (at 1% level of significance)
= 2.021 (at 5% level of significance)

Although Spearman's correlation coefficient (rs) is positive (+0.28), the calculated value of t is less than the table value of 1 percent and 5 percent of significance. Therefore, the null hypothesis is not rejected. It indicates that the difference of degrees of awareness of social responsibility of young and old companies is insignificant. This is also evident from the individual companies. For example, Mogul Lines Limited, a ninety–eight–year–old company scores only 7.50 whereas Bharat Gold Mines Limited scores 37.00 and is only four years old. While the former is third from the bottom, the latter is third from the top in terms of social responsibility awareness. Therefore, it may be said that age of the company is unrelated to the disclosure of social responsibility.

Size

The size of a company is measured in terms of total assets and net sales.

Total assets. To test the relationship between total assets and disclosure of social responsibility awareness, the following null hypothesis is formed:

H_{03}: Size of a company (total assets) has no relationship to disclosure of social responsibility awareness.

The mean score, standard deviation, and "rs" of the companies with reference to total assets are presented in exhibit 8.

Exhibit 8. Total Assets and Social Responsibility

Total assets (Rs in lakhs)	No. 40	$\overline{X}$	σ	rs*
Below Rs 5,000	20	18.50	9.35	0.20
5,000-10,000	7	19.57	8.79	−0.28
Above 10,000	13	26.40	8.71	0.11

*rs = +0.48, t value = 3.36, d.f. = 38
Table value = 2.704 (at 1% level of significance)
= 2.021 (at 5% level of significance)

Exhibit 8 reveals that the mean score of the companies increases with the increase in total assets. There is a positive correlation between the size of the company (total assets) and its awareness of social responsibility (+0.48). The calculated value of t is greater than the table value at 1 percent and 5 percent levels of significance. Therefore, the decision is to reject the null hypothesis. Thus, it can be concluded that total assets is an important factor which influences the disclosure of social responsibility of companies.

Net sales. Do net sales of a company have an impact on discolsure of social responsibility awareness? To test this, the following hypothesis is formed:

H_{03_A}: Discharging of social responsibility is not affected by the net sales of a company.

The standard deviation, mean score, and Spearman's correlation coefficient of the sample companies with respect to net sales are given in exhibit 9.

Exhibit 9. Net Sales and Social Responsibility

Net sales (Rs/lakhs)	No. (39)	$\overline{X}$	σ	rs*
0-1,500	20	19.77	8.82	−0.13
1,500-3,000	7	15.79	9.07	0.32
3,000-4,500	3	21.83	9.46	0.50
Above 4,500	9	29.69	7.29	−0.17

*rs = +0.31, t value = 1.98, d.f. = 37
Table value = 2.704 (at 1% level of significance)
= 2.021 (at 5% level of significance)

Exhibit 9 indicates that the aggregate value of the correlation coefficient is positive (+0.31), but the calculated value of t is less than table value at 1 percent and 5 percent levels of significance. Therefore, the decision is to accept the null hypothesis. A company's sales do not have significant impact on disclosure of social responsibility awareness. The analysis just presented indicates that the size of a company in terms of total assets has a significant impact, but size in terms of net sales has no significant impact on disclosure of social responsibility awareness.

Profitability

It has been said that the profit performance of a company may have some impact on its social responsibility. If the profitability is good, the company may assume more activities as a part of its responsibility toward interest groups. To test the relationship between the disclosure of social responsibility and profitability of the company, the following hypothesis is formed:

H_{04}: Profitability does not influence disclosure of social responsibility.

The standard deviation, mean score, and Spearman's rank correlation coefficient are presented in exhibit 10.

Exhibit 10. Rate of Return and Social Responsibility Score

Rate of return (%)	No. (23)	$\overline{X}$	σ	rs*
0-5	9	17.42	7.22	0.35
5-10	4	23.19	9.39	0.80
10-15	4	30.69	9.23	−0.80
Above 15	6	25.38	4.89	−0.60

* rs = +0.42, t value = 2.125, d.f. = 21
Tabulated value = 2.831 (at 1% level of significance)
= 2.18 (at 5% level of significance)

Exhibit 10 reveals that the rank correlation is positive (+0.42), but the calculated value of t is less than the table value at 1 percent and 5 percent levels of significance, so the null hypothesis is not rejected. The inference drawn from this result is that the rate of return does not have a significant impact on the performance of social responsibility.

Earning Margin

If the earning margin of a company is high, it will be competitively better placed, more successful, and more stable than others. Such a

company may pay more attention to social responsibility. Another view may be that the earning margin of a company is higher because the company does not spend money on social responsibility items.

The following hypothesis is formulated to determine the relationship between a company's earning margin and its social responsibility:

H_{04_A}: The earning margin of a company has no relationship with its social responsibility score.

The standard deviation, mean score, and value of Spearman's correlation coefficient for different categories are presented in exhibit 11.

Exhibit 11. Earning Margin and Social Responsibility Score

Earning margin (%)	No. (27)	$\overline{X}$	σ	rs*
0-5	15	16.23	5.14	0.54
5-10	7	27.39	6.06	0.08
Above 10	5	29.20	6.09	−0.28

* rs = +0.66, t value = 4.353, d.f. = 25
Tabulated value = 2.787 (at 1% level of significance)
= 2.06 (at 5% level of significance)

Exhibit 11 indicates that the aggregate correlation coefficient is highly positive (+.66). The calculated value of t is much higher than the table value at 1 percent and 5 percent levels of significance. The decision is to reject the null hypothesis; thus, the earning margin is an important factor that determines a company's expenditure for social responsibility.

Nature of an Industry

To study the relationship between the nature of an industry and its disclosure of social responsibility, the companies are classified into two broad categories: manufacturing and service. These are further divided into subcategories.[15] The following hypothesis is formulated to test the relationship between the nature of the industry and its disclosure of social responsibility.

H_{05}: The nature of an industry does not influence its social responsibility awareness (that is, social responsibility awareness is independent of the nature of the industry).

The mean and standard deviation for different categories are given in exhibit 12.

[15] This classification is based on the information published in *Lok Udyog* (April 1974).

Exhibit 12. Nature of Industry and Social Responsibility

Industry	No. (40)	$\overline{X}$	σ
Manufacturing companies	29	24.35	9.99
Capital goods	9	22.42	8.8
Consumer goods	5	13.70	5.8
Basic material	15	27.57	7.2
Service industries	11	13.14	6.58
Trading and transportation	7	11.72	5.9
Construction	3	14.67	17.6
Financial rehabilitation	1	18.50	

Chi-square = 7.16
Table value = 6.635 (at 1 % level of significance)
= 3.841 (at 5% level of significance)

Exhibit 12 indicates that the highest scores of social responsibility awareness were for companies engaged in producing basic materials and capital goods. The public enterprises engaged in technical consulting also disclose more than average information concerning social responsibility. The lowest score was obtained by trading and transportation undertakings.

This hypothesis has been tested with the help of the median test. The significance of this test has been evaluated with the help of the Chi-square test. The calculated value of Chi-square is more than the table value at 1 percent and 5 percent level of significance, so the decision is to reject the null hypothesis. The score of manufacturing companies is significantly higher than that of service companies. It may be concluded that the nature of the industry has an impact on the disclosure of social responsibility in public sector enterprises.

The activities of the manufacturing companies are localized in a particular area or in a few places, but the activities of service concerns such as State Trading Corporation, Indian Tourist Development Corporation, Mogul Lines, Trade Development Authority, Housing Development Corporation, and so on, are spread to different areas. Moreover, the nature of the activity of manufacturing undertakings requires heavy expenditure on social areas. Service organizations cannot have much interest in townships, libraries and auditoriums, canteens and cooperative societies, transportation, educational facilities, parks, gardens, hospitals, recreational clubs, and so on. Due to this, their scores are lower than those of manufacturers.

CONCLUSIONS

Disclosure of social responsibility items varies from enterprise to enter-

prise. One-fourth of the sampled companies disclosed less than 20 percent of the total desired information. Fifty percent of the companies scored between 20 and 40 percent of total disclosure. Twenty-two percent of the companies disclosed more than 40 percent of total information, Thus, about 40 percent of the companies disclosed more than 30 percent of total disclosure of social responsibility items.

The age of the company does not have a significant influence on the disclosure of social responsibility items nor does net sales, but the size of the company, in terms of total assets, does have a positive influence on this. The rate of return does not affect social responsibility disclosure, but the earning margin has a significant impact on the disclosure of social responsibility performance of public sector enterprises.

Disclosure of social responsibility items is highly related to the nature of the industry. Manufacturing companies disclose more information relating to social responsibility than do service companies. Among manufacturers, those engaged in producing basic materials and capital goods disclose more information regarding social responsibility than others do.

The present study indicates that public sector undertakings do not disclose many items on the index of disclosure for the users of annual reports. Some items do not require much expenditure, but they may significantly influence the image of a company. For instance, opening a reading room for the general public would cost a company an insignificant amount annually, but it would affect the image hundreds of persons hold regarding its social awareness.

The government may formulate some guidelines for the public sector undertakings regarding the welfare of its employees and the community. Keeping in view total investment, rate of return, earning margins, and such of a company, some standards may be set regarding expenditure on social responsibility, and proper care should be taken to implement them.

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S. S. Singhi and H. B. Desai. "An Empirical Analysis of the Quality of Corporate Financial Disclosure." *Accounting Review,* January 1971.

A. Carl Tietjan. "Financial Reporting Responsibility." *Journal of Accounting,* January 1971.

U. S. News and World Report. "Stepped Up War on Pollution," January 1971.

APPENDIX: INDEX OF DISCLOSURE OF SOCIAL RESPONSIBILITY ITEMS

Items of disclosure		Weight
Expenditure on township		5
Miscellaneous*		5
Establishment of educational institutions		4
Expenditure on antipollution and environmental control measures		3.5
Subsidies to employees' canteens		3.5
Donations (including flood/drought relief)		3.0
Expenditure on family planning program		3.0
Public health and hospitals		2.5
Subsidized transportation for employees		2.5
Assistance to ancillary units		2.5
Subsidized transportation for employees		2.5
Contribution to employees' welfare fund		2.0
Benefits to dependents of workmen who suffer fatal or serious accidents		2.0
Maintenance of dairy and vegetable farms		2.0
Arrangement for adult education		2.0
Training of students in professional institutions		2.0
Assistance to sports clubs		2.0
Employment of physically handicapped personnel		1.5
Employment of exservicemen		1.5
Financial assistance to employees' credit and thrift societies		1.5
Financial assistance and loans to employees to meet emergencies		1.5
Retrenchment compensations		1.5
Maintenance of creches for children of employees		1.5
Parks and gardens		1.5
Libraries and reading rooms		1.5
Public halls/auditorium/welfare centers		1.5
Organizing blood donations camps		1.5
Scholarship to outside students		1.5
Scholarship to employees' children		1.5
Assistance to recreational and ladies clubs		1.5
Screening of educational/feature films		1.5
Employment of apprentices		1.0
Employment of SC/ST candidates		1.0
	Total:	72.0

* Reduction in prices of goods and services, care for quality of product, free expert advice to institutions, customers' training, rehabilitation of the blind, distressed women and widows, debt relief to employees, building of temples, churches, mosques, etc. Coordinating national projects, providing medical facilities to nearby villages, distribution of essential commodities, etc.

Current Regulatory Practices, Corporate Financial Forecasting, and Take Over Bids

UDAYAN P. REGE, W. JOHN BRENNAN, and W. HAROLD SILVESTER*

The regulatory climate in which forecasted information is to be published varies considerably. Over a number of countries, there are examples of regulation by persuasion, by enforcement, of the law of the land, and by a government-supported independent agency. The approach taken by a regulatory body can have an important impact on the nature of a regulation and on the financial reporting practices that ensue. The legal environment can affect the actual or expected reaction to a rule by financial reporters and the inclination by regulators to set rules.

The purpose of this article is to review the regulatory approaches and the relevant reporting practices for forecasted information under takeover bid situations in the United Kingdom, the European Economic Community, the United States, and Canada to identify significant differences.

THE UNITED KINGDOM

The sources of potential regulation in the United Kigdom are three: the Stock Exchange, the City Panel (an informal, nonstatutory grouping of banking, investment, and industrial bodies), and the Institute of Chartered Accountants in England and Wales. To a very great extent, these organizations regulate by the publication of advice. The Stock Exchange has listing requirements and could refuse to list or even to de-

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list a transgressor. The City Panel has a "code" which if violated could give rise to significant persuasive powers. The institute has a members' code of ethics which could be enforced. Despite these powers, regulation in the United Kingdom is generally achieved by persuasion rather than by legal enforcement.

In the United Kingdom, the general disclosure requirement applying in a takeover situation is: "Shareholders must be put in possession of all the facts necessary for formation of an informed judgement as to the merits or demerits of an offer. Such facts must be accurately and fairly presented."[1]

These requirements are generally satisfied by the presentation of forecasts of earnings but, as can be seen, such forecasts are not absolutely required. There are two cases where disclosure is not voluntary: when a company issues its first prospectus to the public, and when a company had made a forecast and then issues a prospectus, merger, or takeover document. In both cases, a forecast must be included in the relevant documents. In the latter case, the previous forecast must be updated.

The fact that disclosure of forecasts is presumed to be the method of satisfying the requirements is evident because, first, many U.K. corporations publish forecasts as a general rule and, second, its acceptance is seen in the fact that the guidance documents indicate how to present such forecasts. Disclosure of the basis of the forecast and of the nature of the assumptions made in specific terms is suggested. In summary, in the United Kingdom, forecasts are certainly permitted, and often used, and there is explicit guidance for their preparation. Only in rare cases are they other than voluntary.

THE EUROPEAN ECONOMIC COMMUNITY

In the European Economic Community, regulation is generally statutory, that is, stated in detail in legislation. This approach is adopted by the European Economic Commission in the approved and draft directives.

The proposed directives of the European Economic Community are to include a statement on the required disclosure in takeover situations. To date, the only material relevant is from the proposed sixth Directive. These requirements relate to situations in which an enterprise is applying for a listing of its securities on a public stock exchange and is, therefore, filing documents to support that application. Article 2 of the directive states:

[1] *Yellow Book,* City Code, Schedule II, part B, sect. II(b), p. 14.

The prospectus mentioned in Article I above must contain all information which, according to the particular nature of the issuer and the securities in question, is necessary to enable investors and their investment advisers to form a well-founded opinion on the net worth, financial situation, results and prospects of the issuer and also on the rights pertaining to the securities for which application for admission is being made.

The term *prospectus* is interpreted as data such as the following:

1. The net turnover since the beginning of the financial year,
2. A description of the most significant recent trends in production and stocks,
3. A description of recent trends in cost and selling prices, and
4. General information on the state of the order book.

This general position may be reasonably presumed to be incorporated into any directive dealing with takeover situations. This approach is not at variance with that in the United Kingdom, United States, or Canada and can be described as permissive, but not demanding.

THE UNITED STATES

The Securities and Exchange Commission (SEC) in the United States is the source of regulation in financial reporting in the United States. This organization specifies requirements for financial and other information to be filed by enterprises wishing to sell securities to the public. As an enforcement agency, the SEC is empowered to interpret such terms as "potentially misleading" with respect to how they affect what should be disclosed by an enterprise. The SEC relies heavily on the Financial Accounting Standards Board (FASB) in the determination of generally accepted accounting principles. Despite this reliance, the SEC on occasion acted on its own in effective opposition to positions taken by the FASB and has promulgated its own rules.

In the United States prior to 1973, the inclusion of earnings forecasts in filings (for example, a prospectus and takeover bid documents) with the SEC were explicitly prohibited. In that year, it was proposed that companies meeting certain restrictive provisions, such as a good earnings history and satisfactory budgeting experience, would be permitted to disclose forecasts on a voluntary basis.

In 1975, the SEC released some of the restrictions on the possible use of forecasts and attempted to integrate these requirements into the formal SEC disclosure system, thereby specifying a precise format. Any statement based on forecasted data would, however, be subject to the normal rules of disclosure.

In 1976 a proposal was advanced to further relax the restrictions on

their use and also a proposed amendment of the rules to eliminate "predictions as to . . . earnings" as an example of a potentially misleading statement. This was designed to reduce the legal liability existing under the 1975 rules. Further, the rules were to apply only to information in formal filings.

In 1978, the SEC issued a release (33-5992) which encouraged management to disclose projections of future economic performance. This release indicated the types of projections that would be approved and the types of conditions that would be demanded.

The SEC moved further in 1979 to establish a "safe harbor" from liability under the United States Federal Securities Laws for inaccuracies in managements' "formal looking statements." The acceptance of the safe harbor principle shifted the burden of proving an absence of a reasonable basis for the projection to the plaintiff. While not required, the publication of assumptions is encouraged and, in view of the safe harbor idea, is likely to be followed by those enterprises seeking this protection.

In summary, in the United States, a firm may publish forecasts on a voluntary basis. Where the forecasts are in formal filings, such as in a formal takeover document, they are likely to follow the SEC guidelines. Published forecasts are encouraged but not required.

CANADA

The sources of regulation for publication of financial information in Canada are the securities and companies acts of the provinces and the federal Corporations Act. Through them, the provisions of the Handbook of the Canadian Institute of Chartered Accountants (CICA) are endorsed as generally accepted accounting principles. In terms of volume of transactions and size of regulatory staff, the Ontario Securities Commission has by far the greatest impact on the Canadian scene. Indeed, several other provincial securities acts are modeled directly after that of Ontario. The acts of the provinces of Quebec, New Brunswick, and Prince Edward Island could be grouped as a second category.

The Canadian securities commissions have the statutory right to deny registration to companies which have not met the required standards of disclosure. The disclosure standards are, for the most part, set not by law but by the accounting profession. In this respect, the Canadian federal, as well as provincial, legislation normally accepts CICA pronouncements as constituting generally accepted accounting principles. Only in cases where the CICA is silent will a Securities Commission act. The Handbook is currently silent on forecasts. The

general requirement for disclosure in the securities acts is such that it will possibly permit what amounts to earnings forecasts to be published. The Ontario Act, section 55(1) reads: "A prospectus shall provide full, true and plain disclosure of all material facts relating to the securities issued or proposed to be distributed. . . ." Forecasts are certainly "material facts" in many, if not all, situations.

Despite this apparent acceptability, the regulations of the Ontario Act allow the publication of estimates of future earnings "only with the consent of the [securities commission] Director [Regulation 46]." This was incorporated into the act in 1966 and is, in fact, a prohibition. Before that time, there were occasional instances of earnings forecasts being included in prospectuses.

The takeover bid documents require certain data which relate to the earnings forecasts controversy. Important events which will or are likely to affect the financial position or prospects of the acquired company should be described. In some cases where valuations are presented, "the key assumptions on which the valuation is based"[2] must be disclosed.

Measured by changes in the act from 1977 to 1978, even a withdrawal of support for disclosure of financial forecasts appears. The 1977 act reads, "If a statement required to be contained in a prospectus would otherwise be misleading . . . the prospectus shall contain such additional information . . . as may be necessary to make the required statement not misleading. . . ." This combination can be cited as justification for the publishing of data similar in nature to an earnings forecast, on the one hand, as a "material fact," and, on the other hand, as clarification of such information as current earnings.

Forecasts are at least tolerated in all non-Canadian jurisdictions reviewed. Canada would be in harmony with the other countries discussed if it were to move toward forecasts in financial statements. The selection of the appropriate approach to regulation depends on the perception of the Canadian institutions. Nevertheless, permission and even encouragement of published forecasts would not appear to be too great a move forward.

[2] Form 34, Item 20.

Professional and Work Values of Accountants: A Cross-Cultural Study

JOEL H. AMERNIC, RABINDRA KANUNGO, and NISSIM ARANYA*

INTRODUCTION

In recent years, there has been a surge of interest in the literature regarding investigating the professional and work characteristics of accountants. While most early studies focused on levels of factors of job satisfaction of various groups of accountants,[1] other studies have examined such phenomena as professional accountants' turnover,[2] motivation within an expectancy theory setting,[3] and professional commit-

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[1] See, for example, Robert H. Strawser, John M. Ivancevich, and Herbert L. Lyon, "A Note on the Job Satisfaction of Accountants in Large and Small CPA Firms," *Journal of Accounting Research* (Autumn 1969): 330-45; Charles G. Carpenter and Robert H. Strawser, "A Study of the Job Satisfaction of Academic Accountants," *Accounting Review* (July 1971): 509-18; and Vincent C. Brenner, Claude W. Carmack, and Mark G. Weinstein, "An Empirical Test of the Motivation-Hygiene Theory," *Journal of Accounting Research* (Autumn 1971): 359-66.

[2] See, for example, J. G. Rhode, J. E. Sorensen, and E. E. Lawler, "An Analysis of Personal Characteristics Related to Professional Staff Turnover in Public Accounting Firms," *Decision Sciences* (1976): 771-800; idem, "Sources of Professional Staff Turnover in Public Accounting Firms Revealed by the Exit Interview," *Accounting, Organizations, and Society* (1977): 155-75; and Joseph A. DeFatta and Ronald D. Johnson, "Personal Attention and the Turnover of Public Accountants," paper presented at the 1978 Annual Meeting of the American Accounting Association, Denver, Colorado.

[3] Kenneth R. Ferris, "A Test of the Expectancy Theory of Motivation in an Accounting Environment," *Accounting Review* (July 1977): 605-15.

ment and related variables.[4] The increased interest in studying the professional and work characteristics of accountants is due to many factors, some of which are a need by administrators in public accounting firms to understand what motivates staff in order to reduce turnover of good staff and improve performance;[5] vocational counseling for aspirants to the profession, and developing strategies to attract superior candidates to the profession;[6] and a concern by the profession, academics, and government with the degree to which accountants hold "professional" attitudes — such as "independence" — in view of the sensitive positions that accountants occupy in society.[7]

An important dimension of this research that has unfortunately remained untapped is the area of cross-cultural studies of the professional and work values of accountants. There appears, however, to be the beginnings of a research interest in this area.[8] This beginning is long overdue, because of the potentially rich contribution of such research to the following issues in accounting:

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[4] James E. Sorensen, "Professional and Bureaucratic Organization in the Public Accounting Firm," *Accounting Review* (August 1967): 553-65; and N. Aranya, J. Pollock, and J. Amernic, "An Examination of Professional Commitment in Public Accounting," *Accounting, Organizations and Society,* vol. 6, no. 4 (1981): 271-80.

[5] Jim Garrow, "Manpower Planning for Accountants," *CA Magazine* (November 1977): 73-77; and Ernest J. Pavlock, "Training Accountants for the Future," *International Journal of Accounting* (Fall 1977): 141-58.

[6] Joel H. Amernic, Nissim Aranya, and Jerome Pollock, "Is There a Generally Accepted Standard Accountant?" *CA Magazine* (October 1979): 34-42; N. Aranya, E. I. Meir, and A. Bar-Ilan, "An Empirical Examination of the Stereotype Accountant Based on Holland's Theory," *Journal of Occupational Psychology,* vol. 51 (1978): 139-145; and D. Rachman, J. Amernic, and N. Aranya, "A Factor-Analytic Study of the Construct Validity of Holland's Self-Directed Search," *Educational and Psychological Measurement* (Summer 1981): 425-37.

[7] See, for example, U.S. Senate Subcommittee on Reports, "Accounting and Management of the Committee on Government Operations of the United States," *The Accounting Establishment* (Washington: Government Printing Office, 1976); Michael Firth, "Recent Empirical Studies in Auditing," *Accountancy* (February 1979): 68; Commission on Auditors' Responsibilities, *Report, Conclusion, and Recommendations* (New York: Commission on Auditor's Responsibilities, 1978); and Joel H. Amernic and Nissim Aranya, "Public Accountants' Independence: Some Evidecne in a Canadian Context," *International Journal of Accounting* (Spring 1981).

[8] Kenneth R. Ferris, Jesse F. Dillard, and Les Nethercott, "A Comparison of V-I-E Model Predictions: A Cross-National Study in Professional Accounting Firms," *Accounting, Organizations and Society,* vol. 5, no. 4 (1980): 361-68; Nissim Aranya, Azy Barak, and Joel Amernic, "A Test of Holland's Theory in a Population of Accountants," *Journal of Vocational Behavior* (August 1981): 15-24; and Nissim Aranya and Kenneth R. Ferris, "Organizational-Professional Conflict: A Cross-Cultural Comparison" (Tel Aviv University Working Paper, 1981).

1. Many accounting firms are international in scope, as are many industrial firms (all of which employ professional accountants). Because such firms may often transfer accounting staff among organizational units located in different cultural environments, an understanding of how work and related orientations differ among the cultural groups involved may be of practical benefit to administrators in planning transfers.[9] In addition, head office controllers of multinational industrial firms may need to adapt their planning and control systems to the variety of cultural environments in which their companies find themselves.[10]
2. Because of the international character of many aspects of modern business, professional accounting firms must have common policies on professional standards which apply to their offices abroad. These policies may concern such important professional accounting concepts as "independence." The degree to which such common policies are successful is in large part dependent on their *acceptance* by international firm partners and employees who are native to the foreign cultural environment. This acceptance may be a function of the degree to which the domestic and foreign members of the same firm or profession hold similar professional and work values.[11]
3. Cross-cultural studies of the professional and work characteristics of accountants may be important to the internationalization of accounting and auditing standards. Most studies concerned with the internationalization of accounting principles have been concerned with cultural differences among preparers (managers) and user groups,[12] and socioeconomic differences among countries.[13] To extend this research

[9] For example, Ferris, Dillard and Nethercott, "Cross-National Study," conclude (p. 367) that the results of their study "suggest that intra-firm, and even inter-firm, transfers of accountants from linguistically and economically similar countries should be possible without significant difficulties."

[10] Helen G. Morsicato and Michael A. Diamond, "An Approach to 'Environmentalizing' Multinational Enterprise Performance Evaluation Systems," *International Journal of Accounting* (Fall 1980): 247-66.

[11] Dykxhoorn and Sinning found that most German auditors, for example, take a less strict view of auditors' independence than U.S. SEC independence rules would require. Hans J. Dykxhoorn and Kathleen E. Sinning, "Wirtshaftprüfer Perception of Auditor Independence," *Accounting Review* (January 1981): 97-107.

[12] B. L. Jaggi, "The Impact of the Cultural Environment on Financial Disclosures," *International Journal of Accounting* (Spring 1975): 75-84; Gilles Chevalier, "Should Accounting Practices Be Universal?" *CA Magazine* (July 1977): 47-50; and James F. Gaertner and Norlin Rueschhoff, "Cultural Barriers to International Accounting Standards," *CA Magazine* (May 1980): 36-39.

[13] Werner Frank, "An Empirical Analysis of International Accounting Principles," *Journal of Accounting Research* (Autumn 1979): 593.

to include professional accountants (both industrial and public practitioners) seems reasonable as they often lead in the formulating and implementing of new accounting principles and auditing standards. If, for example, cross-cultural research found that professional accountants in two different countries held similar attitudes on several work- (and professionally) related issues, then even though there were significant differences in the general cultures of the two countries,[14] some progress may be attainable regarding developing international standards since the professional accountants might tend to act as "opinion leaders." On the other hand, members of the profession in different countries may be so different as to hamper the international transfer of accounting principles and auditing standards. In general, such research may have important implications for the development of a positive theory of accounting.[15]

Thus, the present paper is intended to help develop an understanding of the cross-cultural differences and similarities in the professional and work values of accountants.

CROSS-CULTURAL RESEARCH

Prior researchers have identified several problems unique to cross-cultural research. The first relates to the imprecise definitions of culture offered in the literature. In this study, the authors adopt the view that cultures

> may be defined as patterns of thought and manners which are widely shared. The boundaries of the social collectivity within which this sharing takes place are problematic so that it may be appropriate to refer to a class or regional culture as to a national culture.[16]

Another concern is that many cross-cultural studies are in reality cross-national studies, and a "comparative study of . . . managers not only compares the impact of their cultures, but also of other factors such as their political and economic systems."[17]

The present study focuses entirely on cross-cultural differences by examining professional accountants from two cultural groups within

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[14] For example, one country might be representative of what Jaggi terms *universalism*, the other *particularism*. Jaggi, "Impact of Cultural Environment."

[15] R. L. Watts and J. L. Zimmerman, "Toward a Positive Theory of the Determination of Accounting Standards," *Accounting Review* (January 1978): 112-34.

[16] J. Child and A. Kieser, "Contrasts in British and West German Management Practice: Are Recipes for Success Culture Bound?" in Lane Kelley and Reginald Worthley, "The Role of Culture in Comparative Management: A Cross-Cultural Perspective," *Academy of Management Journal*, vol. 24, no. 1 (1981).

[17] Kelley and Worthley, "Comparative Management," p. 165.

one national setting, thus potentially confounding variables, such as level of economic development, legal framework, and means of achieving professional accounting status, were, in effect, held constant. The two cultural groups were Anglophile and Francophile chartered accountants, and the single national setting was the Canadian province of Quebec.[18] In a sense, this provided an almost "ideal" experimental setting to focus on cross-cultural differences of professional accountants.

THE MODEL

The model studied in this paper is depicted in exhibit 1. The authors' interest centers on the degree to which important professional and work values of professional accountants differ among cultural groups. In this section, the elements of the model in exhibit 1 are described, beginning with a discussion of the importance of the "professional and work values" of interest. The authors next discuss their treatment of two "moderating variables" (age and rural/urban background) followed by a consideration of the effect of culture on the professional and work values of accountants, which draws on the literature relating to Canadian Anglophiles and Francophiles.

The next section of the paper introduces a series of hypotheses flowing from the discussion of the model. The research plan is discussed, followed then by a summary of results. The paper concludes with a discussion of the implications of the findings for accounting, linked to the three issues introduced previously.

Importance of Job Outcomes

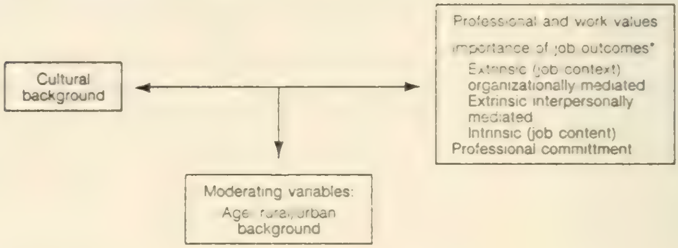
Kanungo, Gorn, and Dauderis note that "[work] motivation and job satisfaction . . . are largely determined by the interaction between the characteristics of the job and the characteristics of the employee."[19] Lawler[20] and others divided job characteristics (or job outcomes) into two broad categories: intrinsic job outcomes related to the *content* of the job, and including such things as the self-esteem a person receives from doing certain work, the feeling of accomplishment; and extrinsic job outcomes referring to the *context* of the job, including such things as pay and prestige. Extrinsic outcomes are further subdivided into those that are interpersonally mediated, such as recognition from

[18] All subjects were members of l'Ordre des Comptables Agréés du Québec (formerly, the Institute of Chartered Accountants of Quebec).

[19] Rabindra N. Kanungo, Gerald J. Gorn, and Henry J. Dauderis, "Motivational Orientation of Canadian Anglophone and Francophone Managers," *Canadian Journal of Behavioral Science* (April 1976): 107-21.

[20] E. E. Lawler, *Motivation in Work Organizations* (Belmont, Calif.: Wadsworth, 1973).

Exhibit 1. The Model



* *The job outcomes*

Extrinsic, organizationally mediated

- Pay — "The pay connected with my position."
- Certainty of income — "The certainty of income in my position."
- Fringe benefits — "The fringe benefits connected with my position."
- Security — "The feeling of security in my position."
- Opportunity for promotion — "The chances, in my position, for promotion."
- Frequency of promotion — "The frequency of promotion in my position."
- Working conditions — "The quality of my work condition."
- Authority in job — "The authority connected with my position."

Extrinsic, interpersonally mediated

- Prestige inside organization — "The prestige of my position inside the company" (that is, the regard received from others in the company).
- Prestige outside organization — "The prestige of my position outside the company" (that is, the regard received from others not in the company).
- Cooperation with others — "The cooperation with the people I work with."
- Develop close friendships — "The opportunity in my position to develop close friendships."
- Recognition from others — "The present level of recognition I receive from professional colleagues."

Intrinsic

- Self-esteem — "The feeling of self-esteem a person gets from being in my position."
- Being final decision maker — "The extent of being final decision maker with respect to the functions which are under my responsibility."
- Opportunity for participation — "The opportunity, in my position, for participation in the determination of methods and procedures."
- Independent thought — "The opportunity for independent thought and action in my position."
- Freedom to act — "The amount of freedom I have in order to act in accordance with professional judgment."
- Personal growth — "The opportunity for personal growth and development in my position."
- Feeling of accomplishment — "The feeling of worthwhile accomplishment in my position."
- Usefulness — "The usefulness of my job."
- Challenge — "The challenges in my job."
- Creativity — "The creativity in my job."
- Routine — "The routine in my job."
- Enjoyment — "The enjoyment in my job."
- Self-fulfillment — "The feeling of self-fulfillment a person gets from being in my position" (that is, the feeling of being abe to use one's own unique capabiities, realizing one's potentials).

others, and those that are controlled by the organization, such as working conditions and pay. Organizationally controlled extrinsic job outcomes help satisfy lower-level needs, and the interpersonally mediated job outcomes help satisfy relatively higher-level social needs.[21] The degree to which different groups of accountants (such as those from

[21] A. H. Maslow, *Motivation and Personality* (New York: Harper, 1954); and C. P. Alderfer, *Existence, Relatedness, Growth: Human Needs in Organizational Settings* (New York: The Free Press, 1972).

different cultures) attach different importance to intrinsic job outcomes, organizationally controlled extrinsic job outcomes, and interpersonally mediated extrinsic job outcomes has important implications for personnel administration and other policies of large firms. Kanungo, Gorn, and Dauderis point out:

> Two groups of employees holding the same job within an organization... may have very different orientations. One group may value more or attach greater importance to extrinsic job factors. On the other hand, the other group may attach relatively greater importance to intrinsic job factors. Because of such differences, the two groups may derive different levels of satisfaction from what the job offers them and thus may be motivated differentially on the job. Thus assessment of work motivation of employees not only requires finding out what the job offers,... but also requires an assessment of employee orientation and values towards the job outcomes....[22]

Professional Commitment

Another "professional and work value" of interest in exhibit 1 is "professional commitment," that is, the relative strength of a professional accountant's identification with, and involvement in, that person's profession. Based on a study by Porter et al., commitment may indicate the belief in and acceptance of the goals and values of the profession; a willingness to exert considerable effort on behalf of the profession; and a definite desire to maintain membership in the profession.[23]

As Aranya, Pollock, and Amernic comment,

> ...accountants who are highly committed to their profession should consider the freedom to act in accordance with professional judgment more important than those who are not as highly committed. They would be less ready to accept situations in which accounting principles are used in ways which are different from those implied by the best professional judgment.[24]

Thus, a high degree of professional commitment is a desirable attribute in a profession such as accounting, which depends so much upon public trust. Indeed, according to classical sociological theory, society grants power and prestige to professions because professionals possess knowledge which is linked to the central needs and values of the social system. In return, professionals are expected to have a commitment to the service of the public above and beyond material incentives.[25]

The degree to which culture affects accountants' professional commitment is, then, an important question, both from the viewpoint of

[22] Kanungo, Gorn, and Dauderis, "Motivational Orientation," p. 108.
[23] L. W. Porter et al., "Organizational Commitment, Job Satisfaction and Turnover among Psychiatric Technicians," *Journal of Applied Psychology* (October 1974): 603-9.
[24] Aranya, Pollock, and Amernic, "Professional Commitment."
[25] Ibid.

establishing fairly uniform international auditing and accounting standards,[26] and also from that of developing a general positive theory of accounting.[27]

Moderating Variables

Age and rural/urban background were treated as moderator variables in this study. That is, these two variables were controlled for in subsequent analyses when the effect of culture on professional and work values was examined. The mean age of the Francophile sample was 38.4 years, while the mean age of the Anglophile sample was 40.8 years. Since there was a significant age difference between the two cultural groups, and since prior research has tended to show that age is positively related to variables, such as organizational commitment (which, in turn, may affect professional committment, especially in a profession such as accounting[28]), age was controlled for.

Rural/urban background also differed between the two cultural groups.[29] Since there is some support in the psychological literature for the concept that individuals with rural backgrounds are more likely to accept middle class norms concerning the intrinsic value of work while those with urban backgrounds are more likely not to,[30] rural/urban background was controlled for in the following analysis in order to focus on differences due to culture only.

Cultural Background

Kanungo, Gorn, and Dauderis suggest several differences between Anglophiles and Francophiles that may have a bearing on professional and work values. Anglophiles tend to be reared in environments which

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[26] Dykxhoorn and Sinning, "Auditor Independence," provides some interesting information on the possible influence of culture on accountant's attitude toward independence.

[27] Watts and Zimmerman, "Positive Theory."

[28] As Ritzer and Trice comment, members may be tied to an organization through their commitment to an occupation, because the organization provides the opportunity to pursue an occupation. This would certainly appear to be the case for professional accountants, especially those in public practice. G. Ritzer and H. Trice, "An Empirical Study of Howard Becker's Side Bet Theory," *Social Forces* 47 (1969): 475-79.

[29] The distributions were as follows:

	Anglophile % (n = 130)	*Francophile* % (n = 132)
Rural	10.6	18.9
Small town	22.0	40.2
Urban	67.4	40.9

[30] C. L. Hulin and M. R. Blood, "Job Enlargement, Individual Differences, and Worker Responses," *Psychological Bulletin* 69 (1968): 41-55.

may be characterized by the term "protestant work ethic," which places great value on work for its own sake, and as a means for "succeeding" in life.[31] On the other hand, the Francophile's environment has traditionally been one that inhibits the development of the work ethic.[32] For example, "family orientation" was found to be central to the behavior of the Francophile entrepreneur,[33]

> and most of his actions on the job are guided by considerations for his family security and happiness.... Francophile managers may be working primarily to live a materially and socially comfortable and secure life outside the organization. For them, "living" is perhaps the primary goal and "working" is perceived as secondary and instrumental to their attainment of the primary goal.[34]

Further, Anglophiles in Quebec tend to have a more "North American" education, with an emphasis on

> personal initiative and achievement, competitiveness, responsibility, and independence.... Francophiles, on the other hand, come largely from a more authoritarian family and educational system...[which] de-emphasizes "work ethic"...and perhaps over-emphasizes "family-ethic".... The Francophile ...coming from such a background will tend to perceive his work not for its own sake, but for the sake of his family and friends.[35]

Thus, status, security, social acceptance, family orientation versus need for achievement, work ethic, and so on, are useful terms with which to describe the Francophile versus Anglophile cultural groups.

Accordingly, it appears that Francophile chartered accountants (CAs) tend to place greater value on extrinsic rather than intrinsic job outcomes, and to value especially those extrinsic job outcomes that satisfy their material and security needs. Further, Anglophile CAs appear to value intrinsic job outcomes over extrinsic job outcomes. In addition, it seems reasonable to suggest that Anglophile CAs value intrinsic job outcomes more than Francophile CAs, and that the reverse is true for extrinsic job outcomes. For the Francophile, the vocation is more a means to an end (a satisfactory family and social life), while for the Anglophile, it is more an end in itself. Anglophile CAs might also be expected to score higher on measures of professional commitment than Francophile CAs, because for them commitment is tied

[31] Kanungo, Gorn, and Dauderis, "Motivational Orientation," pp. 108-9.
[32] Ibid.
[33] N. W. Taylor, "The French-Canadian Industrial Entrepreneur and His Social Environment," in *French Canadian Society,* ed. M. Rioux and Y. Martin, vol. 1 (Toronto: McClelland and Stewart, 1964).
[34] Kanungo, Gorn, and Dauderis, "Motivational Orientation," p. 109.
[35] Ibid., pp. 116-17.

closely to the vocation. A professional accountant "succeeds" in the vocation when he or she models behavior on that of the ideal, committed professional; on the other hand, the Francophile may tend to view the profession as a means of ensuring gratification of more socially oriented ends.

Based upon cultural differences between Anglophile and Francophile professional accountants, then, we would expect to observe differences in professional and work values. Since becoming a professional accountant is itself a process of socialization or acculturation,[36] however, we might find that the differences we expected — which are based on *general* cultural differences between the two groups — are minimized or nonexistent since *both* groups have experienced identical education and internship programs to become a CA. Indeed, there is evidence in the literature to suggest that workers from different countries, but in the same occupation, have a high degree of similarity in their work goals.[37] Nevertheless, the formal hypotheses here are formulated based upon the authors' expectations arising from general cultural differences.

HYPOTHESES

H1: Francophile CAs value extrinsic job outcomes more highly than do Anglophile CAs.

H2: Anglophile CAs value intrinsic job outcomes more highly than do Francophile CAs.

H3: Anglophile CAs score higher on a scale measuring professional commitment than do Francophile CAs.

METHOD

Subjects

Members of two cultural groups — Anglophiles and Francophiles — holding the chartered accountant designation and working in the Canadian province of Quebec were included in the sample and were sent a questionnaire (described later). Details concerning the response rate are given in exhibit 2. A pretest was used to modify the questionnaire.

[36] Wright observes (p. 54) that "the process of educating professionals, in addition to providing technical knowledge, involves socializing students to enter occupational roles." William Wright, "A Empirical Study of the Professional Socialization of Accounting Students," *International Journal of Accounting* (Fall 1977): 53-76.

[37] D. Sirota and J. M. Greenwood, "Understand Your Overseas Work Force," *Harvard Business Review* (1971): 53-60.

Exhibit 2. Response Rate

	Anglophiles	Francophiles
Questionnaires sent (A)	370	300
Returns (B)	146*	132
Response rate (B/A)	40%	44%

* Only 130 were used in the analysis because of missing data on sixteen questionnaires.

Instruments

The questionnaire included the following parts: background questions, measures of importance of job outcomes, and a scale of professional commitment.

The professional commitment measure was based on a fifteen-item questionnaire (reproduced in the Appendix). It was adapted (with permission) from a scale developed by Porter et al.,[38] and was designed to measure the extent to which subjects feel committed to their profession. All items represent statements to which the subject responds on a seven-point, Likert-type scale, ranging from "strongly disagree" to "strongly agree." Example: "I am willing to put in a great deal of effort beyond that normally expected in order to help this profession be successful." Included in the instrument were items pertaining to the subject's belief in, and acceptance of, the profession's goals and values; willingness to exert a great deal of effort to achieve professional goals; and desire to maintain membership in the profession. The wording of six items was reversed in an attempt to reduce response set bias. A measure of overall commitment for each respondent was derived by taking the mean score across all items. The internal consistency of the instrument in this study as measured by coefficient alpha[39] was 0.87 (for Canadian Anglophiles).

Measures of importance of job outcomes were based on the "How important is this to me?" part of Porter's Need Satisfaction Questionnaire.[40] Example: "The authority connected with my position: How important is this to me?" The response range was from minimum (1) to maximum (7). The items included in this part of the questionnaire are grouped in exhibit 1 into intrinsic and extrinsic categories, but they were randomized in the questionnaire.

The questionnaire was translated from the original English to

[38] Porter et al., "Organizational Commitment."

[39] L. J. Gronbach, "Coefficient Alpha and the Internal Structure of Tests," *Psychometriks* 16 (1961): 297-334.

[40] L. W. Porter, "A Study of Perceived Need Satisfaction in Bottom and Middle Management Jobs," *Journal of Applied Psychology* 45 (1961): 1-10.

French by a bilingual Quebec Francophile familiar with the CA profession. Every attempt was made to ensure that both the English and French versions reflected the same concepts.

Data Analysis

The statistical technique employed to test the hypotheses was covariance analysis that controlled age and rural/urban background.

RESULTS

The results are presented in exhibit 3. The expectation was that Francophiles would value extrinsic job outcomes more than Anglophiles would, hypothesis 1, was largely unsupported. In nine of the fourteen extrinsic job outcomes, there was no significant difference between the two cultural groups. Indeed, Anglophiles scored higher on three of the organizationally mediated extrinsic job outcomes (pay, certainty of income, and frequency of promotion) and on the only interpersonally mediated extrinsic job outcome to show a significant difference (cooperation with others), while scoring lower only on the degree to which they valued fringe benefits. It may be that pay and frequency of promotion are closely related to achievement in one's vocation, and consequently — even though they are extrinsic job outcomes — individuals with a "North American" background would tend to value them highly. As mentioned earlier, however, the results do not support hypothesis 1.

Hypothesis 2, though, was largely supported: Anglophiles scored higher on eight of the twelve intrinsic job outcomes, and no significant difference was found for the other four. Anglophiles attach greater importance than Francophiles to self-esteem, autonomy, achievement, and personal growth-type outcomes. This is consistent with the hypothesized effect of cultural background. Overall, as far as hypotheses 1 and 2 are concerned, we might conclude that the "work ethic" notion found support since Anglophile CAs appeared to value outcomes associated with the work itself (job content) more so than did Francophiles. The emphasis on affiliative and security needs which one might expect for Francophiles relative to Anglophiles, however, was not evident for the Francophile CA group. This might be due in part to the nature of the process of becoming a CA. That is, extrinsic outcomes such as prestige, the cooperation of co-workers, and such, are essential to successful functioning as an accounting practitioner, since the process of auditing (for example) entails mutual interdependencies and trust among accountants. The authors' results may indicate that Anglophile CAs affiliative and security-type needs increase during the process of becom-

Exhibit 3. Analysis of Covariance Results

Importance of Job Outcomes				
Extrinsic *Job context factors (organizationally mediated)*	Franco-phile (n = 132)	Anglo-phile (n = 130)	F	P*
Pay	5.40	5.72	3.52	.06
Certainty of income	5.33	5.77	4.71	.03
Fringe benefits	5.30	4.78	5.09	.02
Security	5.27	5.27	0.05	ns
Opportunity for promotion	4.63	5.01	0.27	ns
Frequency of promotion	3.81	4.43	3.12	.08
Working condition	5.40	5.71	2.27	ns
Authority in the job	5.40	5.56	0.76	ns
Job context factors (interpersonally mediated)				
Prestige inside organization	5.15	5.41	2.06	ns
Prestige outside organization	5.10	5.24	0.65	ns
Cooperation with others	5.44	5.82	3.11	.08
Develop close friendship	5.83	6.05	1.76	ns
Recognition from others	4.64	4.44	0.75	ns
	5.34	5.42	0.40	ns
Intrinsic				
Job content factors				
Self-esteem	4.79	5.31	4.64	.03
Being final decision maker	5.78	6.14	3.09	.08
Opportunity for participation	5.52	5.68	0.31	ns
Independent thought	5.91	6.33	5.97	.01
Freedom to act	5.97	6.15	0.77	ns
Personal growth	5.52	6.08	5.85	.02
Feeling of accomplishment	5.86	6.24	4.47	.03
Usefulness	5.73	6.24	9.50	.002
Challenge	5.66	6.26	13.42	.001
Creativity	5.48	5.88	3.58	.06
Routine	2.65	4.23	42.72	.001
Enjoyment	5.99	6.21	1.84	ns
Self-fulfillment	5.98	6.22	1.59	ns
Professional Commitment (scores may range from 15 to 105)				
	77.57	80.61	3.34	.07

* Differences with significance of 0.10 and better are indicated. "ns" indicates that a difference was not significant.

ing an accountant, roughly up to the "natural" level of the Francophiles.

Hypothesis 3 concerning professional commitment was supported, although rather weakly (at the 7 percent level). Clearly, the most striking feature of our results is the degree to which Anglophile CAs value job-content related job outcomes relative to Francophile CAs.

DISCUSSION

Our results appear to be consistent with the concept that culture has a significant effect on certain professional and work values of professional accountants, while differences in other work values which one would expect based upon general cultural differences appear to be minimized by the process of becoming a professional accountant. The results of this study may be important for each one of the three issues identified at the beginning of the paper:

1. Personnel administration of international accounting firms and multinational industrial firms employing professional accountants — International accounting firms apparently cannot safely "assume away" job satisfaction and motivational problems when staff are transferred from one environment to another. This result is consistent with the results reported by Ferris, Dillard, and Nethercott; our results suggest that when professional accountants are transferred between two relatively culturally dissimilar environments, problems may result since the transferee may not attach the same importance to the job outcomes considered desirable by colleagues in the new office. Ferris et al. concluded that such problems would appear to be minimal if the two environments are "linguistically and economically similar."[41] Interestingly, however, the results on hypothesis 1 suggest that the process of professionalism itself may serve to mediate transfer problems, at least to some extent. In addition, there appears to be a need to "environmentalize" motivation and performance evaluation systems, even for professional accountants.[42]

2. Common policies on professional standards — International accounting firms, especially those whose foreign offices audit subsidiaries of domestic parent corporations, strive to develop common policies with respect to ethical standards and auditing standards in general. Cultural differences among staff (or affiliated firms) in different locations may inhibit this process of standardization. For example, we found that Anglophile CAs tended to attach greater importance than Francophile CAs to some job outcomes related to the concept of "independence" (for example, being final decision maker, independent thought). Perhaps uniform firm rules based upon an "Anglophile model" would be resisted to some extent by other cultural groups. Of course, this possible effect would increase to the degree that one was dealing with two even more dissimilar cultural groups, and setting uniform standards

[41] Ferris, Dillard, and Nethercott, "Cross-National Study," p. 367.
[42] Morsicato and Diamond, "Performance Evaluation Systems."

for both groups based only upon the professional and work values of one group.

3. Internationalization of accounting and auditing standards — Following from 2, the accounting profession appears to be interested in harmonizing international accounting and auditing standards. Forces encouraging harmonization [43] include the growth of international trade and the need to raise capital on an international basis, while forces impeding international harmonization include environmental differences, such as differences among countries in industrialization, educational levels, social goals, and chauvinism. Organizations, such as the International Accounting Standards Committee (IASC) formed in 1973, exist to close the gap in financial reporting standards around the world, and to seek an acceptable minimum level of reporting quality on an international basis. The degree to which groups such as the IASC are successful depends in large part on the accounting profession itself. If members of the profession in different countries differ significantly in educational level, professional and work values, and so forth, "internationalizing" accounting and auditing standards becomes even more difficult. On the other hand, if members of the profession in different countries hold similar values (possibly due to the professionalization process of becoming an accountant), they can serve to enhance acceptance of international standards. This study indicates that, at least between the two cultural groups the present authors studied, professional accountants' values *do differ* significantly across different cultures. Possibly this indicates that the focus of groups such as the IASC should, at least to some extent, be understanding of the *cultural* reasons various national accounting groups are loathe to accept certain types of standards, and redirect their efforts toward education and/or promulgating standards that have a better chance of acceptance by professional accountants with diverse values deriving from their cultural backgrounds. An extension of this leads, of course, to the importance of understanding the implications of the cultural differences of professional accountants on the development of a positive theory of accounting.[44]

[43] This section draws upon Jeffrey S. Arpan and Lee H. Radebaugh, *International Accounting and Multinational Enterprises* (Boston: Warren, Gorham and Lamont, 1981), chap. 3.

[44] Watts and Zimmerman, "Positive Theory."

APPENDIX: DESCRIPTION OF PROFESSIONAL COMMITMENT SCALES*

1. I am willing to put in a great deal of effort beyond that normally expected in order to help make my profession successful.
2. I talk up this profession with my friends as a great profession to be associated with.
3. I feel very little loyalty to this profession.
4. I would accept almost any type job assignment in order to keep working in areas that are associated with this profession.
5. I find that my values and the profession's values are very similar.
6. I am proud to tell others that I am part of this profession.
7. I could just as well be associated with another profession as long as the type of organization in which I work is similar.
8. Being a member of this profession really inspires the very best in me in the way of job performance.
9. It would take very little change in my present circumstances to cause me to work in areas that are not associated with this profession.
10. I am extremely glad that I chose this profession over others I was considering at the time I joined.
11. There's not too much to be gained by sticking with this profession indefinitely.
12. Often, I find it difficult to agree with this profession's policies on important matters relating to its members.
13. I really care about the fate of this profession.
14. For me, this is the best of all professions to be a member of.
15. Deciding to be a member of this profession was a definite mistake on my part.

* Response range for all scales is from (1) to (7).

Index of Volumes 17 and 18 by Author's Name and by Subject Area

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[1] William A. Dymsza, <u>Multinational Business Strategy</u> (New York: McGraw-Hill, 1972), pp. 49-53.
[2] Geoffrey Holmes, "Replacement Value Accounting," <u>Accountancy</u> (March 1972): 4-8.

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American Institute of Certified Public Accountants. Accounting Research Bulletin No. 43. New York: AICPA, 1953.

———."Financial Statements Restated for General Price Level Changes." Statement of the Accounting Principles Board No. 3. New York: AICPA, 1969.

Leonard Lorensen and Paul Rosenfield. "Management Information and Foreign Inflation." Journal of Accountancy, December 1974, pp. 98-102.

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